

# *Library Trends*

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*Current Trends in  
Libraries of the United States  
Government*

VERNER W. CLAPP and SCOTT ADAMS, *Issue Editors*

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July, 1953

# Library Trends

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# Library Trends

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JULY, 1953

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## Introduction

VERNER W. CLAPP and SCOTT ADAMS

"It is," said the Hoover Commission, "almost impossible to comprehend the organization and management problems of the Federal Government unless one has some concept of its hugeness and complexity. The sheer size, complexity and geographical dispersion of its operations almost stagger the imagination. As a result of depression, war, new needs for defense, and our greater responsibilities abroad, the Federal Government has become the largest enterprise on earth."<sup>1</sup>

How, then, should the editors of this issue of *Library Trends*, devoted to the libraries of the federal government, introduce their readers to the multiplicity of libraries and library systems serving the largest enterprise on earth? Somewhere in this gigantic goldfish bowl there is an eel of trend, pursued by the behemoth of reorganization. How shall we lay hold of him?

Washington (to change the figure) is a crossroads where overseas librarians are frequent visitors. Perhaps in this introduction the editors can do no better than to consider their taxpaying readers as visiting VIP's, and to offer them an explanation of the working of federal libraries similar to that which is given to their colleagues from overseas. This, then, is an introduction to the libraries of the federal government, and more particularly to the motivations and directions of their contemporary development. In keeping with the announced purposes of *Library Trends*, the papers assembled here have attempted to emphasize the dynamic, not the static. Such emphasis, in view of the ever changing aspect of the federal, and hence the federal library, scene, is altogether fitting.

To begin with a constitutional principle early learned but frequently overlooked by visitors to Washington, there are three branches of the federal government: the legislative, the judicial, and the execu-

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tive. The order in which these are listed is the order in which they are equipped with libraries: the Legislative Branch has but five, the Judicial Branch some forty,<sup>2,3</sup> and the Executive Branch several thousand. The greatest homogeneity is displayed by the libraries of the Judicial Branch, which are all, as might be expected, law libraries. They are also widely dispersed throughout the country, in association with the several United States Courts, and only three are located in Washington. For these reasons they receive comparatively little notice—much less than they deserve—in the articles which follow. Meanwhile, the Executive Branch includes an extraordinary diversity of libraries both in and outside of Washington, while the Legislative Branch includes the library which, from points of view both of size and of variety of services, is the principal of all federal libraries. The subsequent articles deal in consequence chiefly with the libraries of the Executive Branch—such as those of the departments, independent agencies, and commissions—with frequent side-glances to take account of the situation in the Legislative establishment.

Quoting the Hoover Commission again, "In less than 20 years [the federal government's] civil employment has increased from 570,000 to over 2,000,000. Its bureaus, sections, and units have increased four-fold to over 1,800. . . . Only 10 percent of the over 2,000,000 Federal employees are located in Washington; the balance are in the field service."<sup>1</sup> The exact number of libraries serving these (plus or minus) 1,800 agencies with their staffs of (plus or minus) 2,000,000 persons of whom (plus or minus) 10 per cent are in Washington—quite apart from other millions in the Armed Services—is not known, and there is no single directory to them. Mr. Mohrhardt's paper produces certain totals for the field libraries included in federal library systems which exceed the counts given in any published directory. There may well exist single federal departments unaware of the total libraries they harbor, or of librarians they employ. This is especially the case since library activities may exist under other names, such as technical information centers, documents centers, or photographic archives.

Considering the inexactitude of the statistics at all periods it would be hazardous to infer, with Rider<sup>4</sup> and Ridenour,<sup>5,6</sup> an exponential rate in the establishment of federal libraries; yet the figures in Table 1, which indicate the number of federal libraries at various periods, could easily be interpreted in exponential terms.

Just as the needs, operations, and services of the federal government run the gamut of human activities, so are its libraries variegated. They

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TABLE 1  
Number of Federal Libraries, 1800-1952\*

Years	In Washington, D.C. and Vicinity	Elsewhere
1800†	2	—
1850	9	—
1859	18	—
1876‡	30	43
1897	37	—
1930	61	91
1951§	121	628
1952	130	—
	133	1,201
	—	6,766

\* Source: 1850 data from Jewett, C. C.: *Notices of Public Libraries in the United States of America*. Washington, D.C., Printed for the House of Representatives, 1851, pp. 138-142; 1859 data from Rhees, W. J.: *Manual of Public Libraries, Institutions, and Societies in the United States and British Provinces of North America*. Philadelphia, J. B. Lippincott and Co., 1859, pp. 585-650; 1876 data from U.S. Bureau of Education: *Public Libraries in the United States of America . . . Special Report*. Part I. Washington, D.C., U.S. Government Printing Office, 1876, pp. 1012-1142; 1897 data from Library Association of Washington City: *Handbook*. Washington, D.C., 1897, supplement, 1898; 1930 data from *The American Library Directory, 1930*. New York, Bowker, 1930, pp. 245-268; first set of 1952 data from *Library and Reference Facilities in the Area of the District of Columbia*. Ed. 4. Washington, D.C., Library of Congress, 1952; second set of 1952 data from U.S. Congress. House. Committee on Appropriations: *Legislative Branch Appropriations for 1953, Hearings* . . . Washington, D.C., U.S. Government Printing Office, 1952, pp. 63-71.

† Two federal libraries (in the State and War Departments) trace their establishment prior to 1800. Two others (Library of Congress and Library of House of Representatives) were established in that year but were inoperative until later.

‡ The figures taken include only libraries marked as governmental and garrison libraries, and omit a few government libraries not so marked, e.g., those of Howard University and the Government Hospital for the Insane, Washington, D.C.

§ The figures in the table are from a page-by-page count in the *American Library Directory, 1951*, Ed. 19 (New York, Bowker, 1951). These differ considerably from those given in its recapitulation, p. ix.

|| The heading here should be "library units" rather than "libraries," and the count refers only to the five agencies reflected in Table 2 in Mr. Mohrhardt's paper, *infra*, plus the 37 field libraries of the Judicial Branch (see ref. 3, *supra*, and the text to which the ref. applies).

include on the one hand ivy-clad college and university libraries; on the other, special libraries for music, the graphic arts, archaeology, pure science, medicine, agriculture, and other applied sciences. There are

libraries of maps, of photographs, of private and public papers. They serve on the one hand the most highly specialized nuclear physicist or semasiologist, and, on the other, the unlettered child on an Indian reservation. Between these extremes they serve, in a far-flung network of army camp, navy battleship, air force base, veterans hospital, and State Department information libraries, the recreational, instructional, and informational needs of the fighting forces, of the disabled veterans, and of people in foreign countries with curiosity about the United States. There are working libraries, libraries which attempt to form comprehensive collections within large divisions of the whole field of knowledge, and libraries which specialize in minute sections of one or other of these divisions. Indeed, there was until recently for some years a "deposit library" of the United States government within 22° of the South Pole, in a cache left by Admiral Byrd's U.S. Antarctic Service Expedition!<sup>7, 8</sup> Finally, there are the three giants, which taken together form almost a universality of coverage, the three so-called national collections of the Library of Congress, the Armed Forces Medical Library, and the library of the Department of Agriculture.

It is difficult, among such diversity of size, scope, organizational status, and service, even broadly to categorize the federal libraries. Except for those which are components of the systems described by Mr. Mohrhardt, each almost creates a category in itself. Thus, it is only with some difficulty that Mrs. Hooker, in her table summarizing the federal libraries in the Washington area by type or subject of interest, has been able to reduce these 130 libraries to 14 types.

Both the number and the diversity of federal libraries must be considered in the light of federal bureaucratic growth. Few of them trace their foundation prior to the year 1800, when the government moved to the seat prepared for it in the District of Columbia. Save for the library of the Jesuit college in Georgetown, the District in 1800 was a wilderness devoid of institutionalized book collections. This very fact was to serve as a stimulus to library development, and to have many interesting and useful results. It resulted, for example, in the Library of Congress, founded in that year of 1800. It gave rise to the initial library program of the Smithsonian Institution; and though that program was brief and premature, it made permanent contributions—in two library censuses, in the objective of a national library collection, in experimentation toward national library service, and in the first international conference of librarians.<sup>9, 10</sup> Later, the same stimulus resulted in the bibliographic program of the library of the Surgeon

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General of the Army (now the Armed Forces Medical Library), and in the early printed catalog card operations of the Department of Agriculture Library.

By the end of the first century, the area that at its beginning had been almost completely innocent of libraries could rejoice in no less than 68, of which 37 were owned by the government; and the big-wigs of the American Library Association were talking to the Congressional Joint Committee on the Library about ways in which these might be coordinated!<sup>11</sup>

"Coordination" both did and did not take place (as so often happens in affairs of government), but in any case the federal libraries continued to proliferate. By 1930, when the *American Library Directory* first acknowledged the existence of a category of "federal libraries," the First World War had intervened, and the number of libraries had doubled since the census of 1876. But 1930 was the eve of a very considerable expansion of governmental agencies, which was to continue throughout the depression, through the defense mobilization, through World War II, and into the postwar period. This expansion and multiplication would in any case have tended to increase the federal library establishments (though there were simultaneously certain notable instances of consolidation and reduction of the actual number of libraries by some agencies—see Mrs. Hooker's and Mr. Mohrhardt's papers), but there were other factors as well tending to the development.

One of the factors has been the greatly increased recourse to library sources of information in governmental areas of activity, as in others, in the last twenty years. Here one example must suffice: during the fiscal year 1952, the Legislative Reference Service in the Library of Congress received nearly twenty-four inquiries from members of Congress for each one that it received during the fiscal year 1930.<sup>12, 13</sup> Another influence has been the rising interest taken by the federal government in scientific and technological research and development—an interest, computed in dollar expenditures, increasing from \$23 million in 1930<sup>14</sup> to some \$2.2 billion in fiscal 1953,<sup>15</sup> and which has involved the establishment of so many libraries serving scientific and technological interests that this category now exceeds any of the others in which the federal libraries may be grouped (see Table 1 in Mrs. Hooker's paper, *infra*).

Still other factors have contributed. One is the official recognition

of libraries as agencies for instruction and recreation in the Armed Services (compare with the situation in World War I, when the army camp library services were provided through the American Library Association), and of recreation and rehabilitation in the hospitals of the Veterans Administration and other government agencies. Another, of course, is the discovery that libraries are potent instruments of occupation and foreign policy, with the resultant establishment of the network of Amerika Hauses, Civil Information and Education Libraries, and U.S. Information libraries around the world. Of the extensive library systems, with accompanying central services, that have resulted, more is to be found in the papers of Mr. Mohrhardt and Mr. Lacy.

In general, then, the rise of federal libraries parallels the twentieth-century growth of federal agencies, representing their broad variety of interests. They are very unlike in establishment from agency to agency, and even within an agency. They represent a multiplicity of subjects and purposes, and in this they differ widely one from another. However, by virtue of the fact that they are *federal* libraries, they have a certain homogeneity.

The editors apprehend that their readers might be disappointed with this issue if the paper curtain of Bureaucracy—with a big "B"—were not momentarily twitched aside to permit a few intimate glances at the Washington wonderworld. For this is what the libraries have in common: they all are constituent units of the greatest bureaucracy on earth.

In the first place, federal libraries necessarily exist in a climate which is to an extent legalistic. Each must be prepared to answer the question, "What is your authority for doing what you're doing?" A Congress anxious to control potential mushrooming of governmental functions, a Bureau of the Budget charged with the responsibility of seeing that those things which are legally authorized are efficiently done, a General Accounting Office alert to guard against the misexpenditure of federal funds—these and other agencies continuously question the statutory and regulatory authority under which the units and their libraries operate.

In descending order of importance, the federal libraries are governed by

1. Public laws.
2. Executive orders (in the Executive Branch; but these orders are



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not infrequently followed, for the sake of uniformity, by agencies in other branches).

3. Decisions and regulations of regulatory officers and bodies, e.g., the Attorney General, the Comptroller General, Bureau of the Budget, Civil Service Commission, Loyalty Review Board, General Services Administration.

4. Departmental (commission, independent agency) regulations.

5. Bureau (or other component agency) regulations, orders, and procedures, including special regulations affecting field service (i.e., service outside the District of Columbia).

Thus Congress may pass a law affecting recruitment of federal employees. The Civil Service Commission issues a directive interpreting the law; the department concerned incorporates the directive with interpretation in a manual sheet; the sponsoring bureau sends the department's sheet with a transmittal letter, and the library is brought into line.

Working back through the levels of printed authority to discover what courses of action are permissible requires either special skills, or acquaintance with experts. The authorities are not so often contradictory as absent or anachronistic. For example, the sole citation to the Armed Forces Medical Library by name (under the heading "Libraries—Surgeon General's Office") in the 1946 edition of the *U.S. Code* refers to an authorization extended to that library to bind books in "half Turkey" when these books are for its exclusive use.

In addition to public laws and departmental regulations, however, the federal libraries are governed by the regulations of other mandatory servicing agencies. The Civil Service Commission's regulations concerning recruitment, position standards, qualification standards, and many other matters affecting terms of government employment, are binding on all but a very few units. Mr. Dunbar's paper describes these conditions in detail. Similarly, the General Services Agency establishes a number of blanket procurement contracts for periodical subscriptions and book purchases which are mandatory on all except exempted agencies. All printing and binding of the government is required by law to be done at the Government Printing Office, except for those units removed from Washington to whom the Public Printer may grant waivers. While the use of these mandatory servicing agencies has been created for government economy, the smaller libraries have frequently raised questions of their effectiveness.

Apparently, this legalistic orientation is all a matter of acclimatization; the federal libraries do thrive, and those nonfederal librarians who have passed through the Ordeal by Trial (Form 57, Application for federal employment), and the Ordeal by Vigil (waiting for clearances) and have taken the Oath, have generally managed to adapt themselves successfully (cf. again Mr. Dunbar's article).

There are two more facets of bureaucratic life which are common to the federal libraries: security and intelligence. By virtue of the fact that the libraries are agencies of the federal government, and that each employee has sworn to uphold the Constitution of the United States, these considerations take on seriousness.

Necessity for security in government is patent and rests upon two simple principles: (1) certain aspects of the business of government must be conducted in confidence, and (2) the giving of aid and comfort to an enemy or potential enemy is to be avoided. The first principle is supported by regulatory, and the second by statutory, authority.

From the first of these principles derive two types of security practices. The first, and one generally obnoxious to the gentlemen of a free press, is mere administrative security. Documents issued in preliminary editions for comment, organization plans, and similar "not-for-publication" items are commonly labeled "Restricted" or "For Administrative Use Only." These cause but minor problems to libraries; their use must be controlled, and as a rule they are quickly superseded or published.

The second type of administrative confidentiality represents a special case: agencies awarding development contracts believe that they have a responsibility to protect the commercial or patent rights of their contractors, and have invented protective mechanisms governing the distribution of project reports. This practice, originating at the Central Air Documents Office, has necessitated extra controls in libraries receiving such reports.<sup>16</sup>

The third type of security practice, national security, flows from the second principle stated above, and is serious business. The grades of "classification" into categories of confidentiality, with the provisions for safekeeping and distribution, are meticulously prescribed by Executive Order of the President,<sup>17</sup> and libraries having anything to do with classified documents *must* follow them. Certain assurances are essential. First, all members of the staff handling classified documents must receive security clearances based on exhaustive FBI inquiry. Second, the library must be equipped with steel lock-files, safes, or vaults for secure storage. Third, the library must provide a secure

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handling system, including receipting mechanisms, and verification both of the clearance status of a potential user and of his official need for the document. Needless to say, any catalogs of classified documents are themselves classified.

All this costs time and money. It also has hidden costs; eternal vigilance against laxity in security regulations, or infringement of them, harries many a custodian. The librarian trained in a spirit of free inquiry frequently makes adjustments to security consciousness with personal and professional malaise, since the traditional techniques and objectives of library service do not find classified documents truly compatible. By and large, the libraries handling them occur mainly in the defense agencies, and even there such papers tend to concentrate in secure document rooms. It is significant to note that federal librarians have actively participated in the down-grading and open dissemination of documents where the classified character had become anachronistic. After World War II, librarians advising on the President's Publication Board promoted the general circulation of wartime research reports and captured documents.<sup>18</sup> Nevertheless, if in these days a federal library is to provide the unpublished reports its official clientele needs, it can only with difficulty escape the storing of some security classified material.

Perhaps the foregoing will explain partially the position of District of Columbia librarians taken during debate in meetings of the American Library Association on the "Use" versus "Abuse" of loyalty oaths.<sup>19-24</sup> As a group, the federal librarians have day-to-day responsibility for actions whose very essence is loyalty to the government, and to the Constitution which they swore to defend when they were employed.

The incidental provision of "intelligence" for government agencies primarily concerned with the national security is another function which a number of federal libraries perform. "Intelligence" in this sense is not information on the tactical disposition of enemy troops, but economic, social, cultural, scientific, and technical facts on a global scale—the data needed in order to estimate accurately the state of world affairs. General William Donovan, wartime Chief of the Office of Strategic Services, is reported to have said that 95 per cent of the materials of intelligence lie buried in libraries.<sup>25</sup> While this may have been stated deliberately to deglamorize the cloak-and-dagger concept of intelligence operations, and to bestow credit upon that group of analysts which patiently gathered statistics revealing Nazi industrial

potentials, it is nonetheless true that in a century of total war *all* scientific, technical, economic, and social information, wherever stored, has a strategic potential. During World War II the intelligence agencies discovered libraries.

This lent a significance to library collections, particularly those with substantial holdings of foreign publications, which they had not theretofore enjoyed. Depending on the degree of their political sophistication, the federal librarians reacted to this new turn of events with romantic excitement, with inquietude, or with realistic determination. While most of them are content to leave the acquisition of data to the intelligence agencies, all of them are aware that in the event of war the information they have added to their libraries will become a national intelligence resource.

The point should be made that the dissimilarities of federal libraries derive from the varying programs of their parent agencies, while their similarities are associated with common control mechanisms. This may explain why coordination of federal library activities, which, as previously remarked, has been the subject of recommendation at least since 1896,<sup>11, 26-28</sup> has made so little progress. In addition to the varying directions of their program activities, there exists no machinery for that coordination. Such machinery would probably need to involve the responsible officers for the several libraries, and this presents manifold difficulties where three of the libraries are quasi-independent agencies, one has bureau status, while the others are offices, sections, or even smaller and less autonomous units of larger establishments. There is also the fact that the libraries to be coordinated are scattered among all of the three branches of government, and it would be a unique authority indeed which could run to all three.

In spite of the lack of machinery for it, coordination itself has been far from entirely lacking. Among those libraries which attempt to maintain comprehensive collections there are understandings regarding acquisition, e.g., in the matter of veterinary medicine between the Armed Forces Medical Library and the library of the Department of Agriculture,<sup>29</sup> and among the Library of Congress and the National Gallery of Art, the Office of Education, and the National Archives in the matter of fine arts, education, and motion pictures respectively.<sup>30-32</sup> Exchange of unneeded materials among the various libraries has proceeded for years to their great advantage. A certain coordination in the acquiring of foreign publications is effected through the facilities of the Department of State,<sup>33</sup> and is especially highly developed with respect

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to certain classes of materials, such as maps. Further interrelation of foreign exchanges has been thought to be desirable, and has been explored, but not implemented.<sup>34</sup> Much coordination is almost automatically effected through the fact of interlibrary loan, and as well by its limitations. Cooperative cataloging arrangements are in effect. A *Union List of Periodicals, Transactions and Allied Publications Currently Received in the Principal Libraries of the District of Columbia* was issued by the Library of Congress as long ago as 1901 in a preliminary edition, listing some 13,000 titles, but the definitive edition was never published; nor have the catalogs of the other federal libraries, with the exception of that of the Armed Forces Medical Library, though copied, ever been filed into the National Union Catalog. These defects are symptomatic of a situation which directly affects the possibilities of long-term federal library coordination—namely, that federal libraries are no more static than the agencies which they serve, and collections may be consolidated or divided in accordance with over-all governmental reorganization.

When all is said and done, it is perhaps as well that there is no machinery for federal library coordination. Its effect might be to reduce the services to the lowest common denominator; whereas now each federal librarian is, as far as his abilities, his status, and the climate of his agency allow, capable of responding either individually or in informal group action to situations which are susceptible of improvement. Certainly there is considerable initiative, experimentation, and at times ingenuity shown by federal libraries—as is described in Mr. Gull's paper—which might be repressed by coordination.

The federal libraries differ, then, principally in those activities which reflect the variegated functions of their sponsoring agencies; their common interests are touched by over-all governmental regulatory authority, and by their involvement, as federal agencies, with questions of security. In professional matters their librarians perhaps have more in common with their nonfederal colleagues in similar types of work than they do with each other.

For example, it may be significant that there is no professional association of federal librarians, as there is of federal lawyers; and that federal librarians are found active most frequently in those professional groups which correspond to the type of service in which their libraries are engaged—special, public, law, medicine, music, hospital, college and reference, and so on. The nearest approximation to a professional association of federal librarians is one devoted to the

interests of the librarians of the Armed Forces—but this is organized within the bosom of the American Library Association. As Mr. Dunbar's paper indicates, those federal librarians located in the Washington area find outlets for their group professional energies in the Washington Chapter of the Special Libraries Association, the District of Columbia Library Association, and in other local or regional sections of various national library associations.

This is all probably as it should be, and were it otherwise would possibly reflect an unhealthy situation—one in which the inbred problems arising from a common employment would predominate in interest over those of profession-wide concern. The hope that this situation will never occur need not obscure the fact, however, that there are numerous and indeed weighty problems arising from the common employment which require consideration. These receive attention in informal groups and *ad hoc* committees, even though a federal library council has never come into being.

The affairs of federal libraries and librarians touch in many respects on the affairs of the profession as a whole. There was once a time when a principal federal librarian could absent himself from professional meetings. The following colloquy between a congressman and the Librarian of Congress a half century ago illustrates this:

Representative Quigg [a member of the Congressional Joint Committee on the Library]: Are you a member of the American Library Association?

Mr. Spofford [the Librarian of Congress]: I am; yes, sir . . .

Representative Quigg: You have attended most of the meetings of the American Library Association, have you not?

Mr. Spofford: Not of late years. I did attend the first meeting in Philadelphia in 1876, and meetings since in New York, and twice in Washington, but I can not find time to leave this onerous business of copyrights. I should like to do so very much.<sup>35</sup>

Today the situation is quite altered, and the conditions in libraries are such that participation by federal librarians in the work of professional organizations is a practical necessity for keeping the work up to date, for recruitment, for finding sources of assistance, and even for guiding customers to the product. In 1900-01, for example, the name of only one federal librarian—that of Herbert Putnam—was to be found in the list of officers, board members, and committee chairmen of the American Library Association; in 1953-54 there are twelve,

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and this degree of participation is just as marked in the other library associations devoted to special interests.

The areas of common interest among the federal librarians and their nonfederal colleagues include almost the whole range of professional concerns. Perhaps those in which they have had and will continue to have the most to contribute are the cooperative building of library resources, including participation in the Farmington Plan; the development of common practices in cataloging and classifications; and the planning and executing of bibliographical projects and services. Several of the subsequent papers—those of Mrs. Brownson, Miss Fine, Mr. Gull, and Mr. Rogers, specifically—touch these relationships in greater detail.

The knowledgeable reader will observe, in this introduction and in the papers which follow, one signal omission. There is nowhere here any real discussion of the work of the Library Service Division in the U.S. Office of Education. This has been deliberate. While the establishment and services of the Division hold the greatest interest and have actually and potentially the utmost importance for librarians and libraries, the editors have for two reasons refrained from mention of them. The first and less weighty of these is that the Division does not, as a library, come technically within the scope of the present issue of *Library Trends*, which has been restricted thus far to the libraries and library-like facilities of the federal government. The preponderant reason, however, is that the Division is part of an even larger canvas than is being painted here—the picture of library planning in the United States and of the relations of the American library world to the federal government. It may be hoped that in good time an issue of the journal may be devoted to this topic. In such a number the Division of Library Service will naturally and necessarily be a central subject of attention.

The editors have attempted to find in the federal library complex not a static pattern, but dynamic evolving situations. Since the library activities are inextricably related to the larger programs of government agencies, their missions inevitably alter with governmental reorganization. Hence a change in national administration, such as has occurred since the initiation of this issue, will inevitably condition to some extent the character of federal library development, and the directions taken by it.

Regardless of political shifts, however, there are certain demon-

strable trends, rooted safely in history, which appear to be more important than others and to deserve remark:

*Recognition of the essential role of libraries in government.* If the statistics show anything, they prove that libraries have been found serviceable in government operations of all kinds, whether purely administrative, legal, and judicial, or concerned with scientific research and development, intelligence, morale, instruction, or the carrying out of foreign policy. It does not seem likely that this trend will reverse itself.

*Tendency to form national systems.* The multiplication of libraries of particular types, the decentralization of government activities, the economies possible through central control and central services—these are factors which have tended to the creation of systems of federal libraries, especially since the beginning of World War II. The trend seems likely to continue.

*Experimentation.* Congress understandably dislikes to add additional permanent members to the already immense civil service. This fact alone, when reflected in the inability of federal librarians to secure the enlarged staffs which they believe are fully justified by their workloads, would compel experimentation in order to produce more bricks with less straw. Whether in the use of microfilm, the application of photo-offset to bibliography, the construction of a rapid selector, or the development of a facsimile network to obviate interlibrary lending, the federal librarians have not recoiled from new ideas. This trend is likely to persist, as is its cause.

*A national outlook.* There may have been a time—and it is reputed that there was—when a job in a federal agency in the sleepy town of Washington on the banks of the Potomac was a sinecure where the world could be forgotten. Those days have certainly gone. The agencies which the federal libraries serve are nowadays strenuously engaged in service to forty-eight states, and their libraries are not likely to forget this, no matter how intradepartmental their activities may appear to be at times. They live in an atmosphere of national responsibility. The extent to which this situation may affect their operation may be hard to determine, but it certainly affects their outlook. Indeed, this trend possibly is more unmistakable than any other, and perhaps a recognition of it is responsible for the present collection of essays.



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RUTH H. HOOKER

TABLE 1

*Number of Federal Libraries in the Washington Area  
by Type or Subject of Interest \**

Type or Subject of Interest	Number of Libraries
Archives	1
College and university (including departmental libraries)	4
Economics	20
Fine arts	4
Foreign Affairs	1
General	1
Hospital	2
Law and legislation	24
Military and naval affairs (administration)	5
Medicine and public health	3
Photographic	12
School and institute	6
Science and technology (including cartography, engineering, etc.)	37
Social security, housing, labor, and veterans' affairs	10
Total	130

\* Source: *Library and Reference Facilities in the Area of the District of Columbia*.  
Ed. 4. Washington, D.C., Library of Congress, 1952.

of Art and the National Gallery of Art. Hospital libraries, however, need astonish no one, nor should the large number of libraries concerned with law and legislation. The libraries classed as military and naval consist only of those devoted to administrative, operational, and historical aspects. The libraries of medicine and public health might be grouped with the science libraries, yet make up a recognized category.

The large number of libraries classed as photographic is of interest. Some of these deal with the subject of photography, such as that at the Naval Photographic Center, but most are collections of photographs rather than books. The school and institute libraries include the National War College Library and the Armed Forces Industrial College Library, besides others. The large number of science and technology libraries will be understood when it is known that among them are libraries of cartography and geography, as well as of engineering and of the physical and chemical sciences. The final group in

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the table brings together a number of libraries whose common denominator of interest might be termed sociological, but which remain rather miscellaneous.

The services rendered by federal libraries differ widely from one another in accordance with the kind of library or other peculiar situation. For example, those in educational institutions occupy a place more nearly related to that of college and university libraries than to that of other federal libraries. The service offered by the Armed Forces Medical Library is at least partly due to the fact that it is not located immediately adjacent to a large body of patrons, and that it has the greatest wealth of medical literature existing in any one library in the world. Also, the sort of library and type of work done often require widely varying equipment. The storage equipment used by (a) a map library, (b) a library of photographs, (c) a law library, (d) a library which collects files and clippings relating to legislation, and (e) a library specializing in unpublished scientific and technical reports bearing security classification will be of at least five different kinds. The same is true as regards reading room equipment, tables, measuring instruments, projectors, and copying apparatus.

The differences which begin with the services required and which extend into materials collected, and thence to equipment, are of course reflected in the qualifications of the staff. Here they are at their maximum. There is much greater similarity between a library of maps and other libraries than between the cartographer who supervises the map library and the librarians in the other libraries. Thus, too, historians, under the name of archivists, direct libraries of official records, and people with scientific or technical training serve, with the title of information specialists, in special libraries known as technical information centers.

The primary purposes for which a federal library is used to further the work of its agency is usually one or more of the following: (1) to provide information needed in the conduct of the agency's business; (2) to serve as an immediate instrument for the execution of the agency's policy and program; and (3) to assist in the execution of that program through its morale-building ability.

*The library as a source of information for its agency.* The first of these purposes, and the most common, is represented by the special library set up to provide selective and timely information, in whatever form, which will further the work of the agency. Most organiza-

tions which have libraries support them at least in part, and sometimes exclusively, for this purpose.

In order to understand the environmental conditions under which the federal libraries work, it is necessary to turn to one of the over-all organizational handbooks such as the *Congressional Directory* or the *United States Government Organization Manual*. While these publications are hardly adequate for a full understanding of government activities—even the comprehensive data provided by the President's Budget can scarcely achieve this—they do suggest the various concerns, strata, and functions of the federal agencies served by the libraries. The library of any one agency necessarily serves a large number of interests.

Taking, for example, a hypothetical agency, the Office of Radioactive Waste Disposal, it is apparent that its needs for information fall in the following fields: (a) legal and legislative reference (to insure its operation within federal laws, to plan its operations in accordance with state laws, to provide its counsel with materials to arbitrate claims, etc.); (b) public administration (to equip its administrators with information, to establish management training programs designed to achieve efficient operation); (c) program administration (to give the agency staff information reflecting the over-all adequacy and effectiveness of its program); (d) program materials (to provide the staff with specific information needed in the course of daily operations, which may involve historical, statistical, financial, or other economic or sociological data, or which may be devoted to such matters as research and testing. Thus the library's materials must cover many disciplines: nuclear physics, chemistry, physiology, sewage systems, and water supply, to suggest only a few). The library of this hypothetical agency, therefore, must provide the services and materials which will meet these needs.

Most large federal libraries consequently either have collections of legal publications or a law library branch. It is necessary for officials to know the history of the legislation related to the agency, as well as other laws which may affect it. Some libraries make a practice of collecting legislative histories automatically when legislation would affect its agency. The Federal Security Agency, for example, has bound sets of such histories.

Most of the federal libraries also provide collections on management, and of background social, economic, and cultural literature which may serve to document the success, or lack of success, of the

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agency's programs. Their principal collections, of course, are in the specific subject areas of the agency's interests—periodicals, documents, and books in the scores of technical and scientific fields represented by the specializations of agency employees.

However, no one agency library is, or can be, wholly self-sufficient. The proximity to each other of such libraries, and their common interest and principles of economy, make for a more highly developed interlibrary loan system than exists elsewhere in the world.

Not only do they lend heavily to each other, but the Library of Congress provides a loan service which most federal libraries depend upon to a considerable extent to supplement their own holdings. While it is true with libraries everywhere that they must look to others for material completely out of their fields, most federal libraries in Washington build their collections with the expectation of borrowing all items not in fairly regular demand if such items are beyond their immediate range of interest. Because of its enormous resources, the Library of Congress, which lent 99,900 volumes in 1951/52, carries the greatest burden. Thus it is actually supplementary to the libraries in almost all federal agencies and has a hand in serving them all.

The Library of Congress may also serve to demonstrate how library service supports government operations. While it exists as a separate institution, i.e., not a part of any agency, and though it has taken on much of the character of a national library, its *raison d'être* is its work for the Congress. This is primarily related to the legislative process. While the members of Congress have always used its general services, as their problems grew in size and complexity they needed more and more specialized assistance. The first formal provision for this was an item of \$25,000 in the Legislative, Executive, and Judicial Appropriations Act for 1915 "To enable the Librarian of Congress to employ competent persons to prepare such indexes, digests, and compilations of law as may be required for Congress . . ." <sup>2</sup> Ever since that time there have been constantly increasing special aids to the Congress, which culminated in the formal establishment of the Legislative Reference Service as a department of the Library of Congress, as authorized by Section 203 of the Legislative Reorganization Act of 1946. The history <sup>3</sup> of this shows a marked trend of the members of Congress to depend more and more on such special assistance. Some of the kinds of matter it makes available upon request to members of Congress are research reports on subjects under investigation or involved in legislation, the results of personal discussion with a subject specialist,

"spot" information furnished either orally or written, material bearing on a particular problem, and a limited amount of translation, graphic, and photoduplication service. The Service will also assist members with the preparation of statements for use in speeches, and with bill-drafting when the normal provision for this is inadequate. Statistics show that about 16,000 inquiries were handled in the fiscal year 1945 and well over 45,000 in 1952; also that in 1946 the staff numbered 79, and in 1952, 160. Through the Legislative Reference Service the Library of Congress is in truth contributing to the work of its "agency"—the Congress.

In common with a large number of special libraries in the technical, scientific, industrial, and economic fields, the federal libraries provide their agencies with a variety of information. More and more the agencies are delegating to their libraries the compilation and editing of indexes. In some cases these deal with the agency's own productions, such as a list, recently issued, of the Department of Commerce publications—a bibliography of items selected for their usefulness in research, rather than a complete compilation.<sup>4</sup> A similar function frequently delegated to the library is the responsibility for preserving archival copies of the publications of the agency.

Another function which is being more and more frequently assumed by federal libraries is the preparation of indexes, and sometimes abstracts, of literature from all sources which is pertinent to the work of an agency. Sometimes these are started as newssheets, to assist the library in advising its users of new material available. They are usually selective, and arranged in whatever way the agency finds most useful. These very requirements sometimes make them the most valuable bibliographic tools in the fields covered. Some cover a broad subject and some a narrow and detailed one. The tendency to treat one topic fairly thoroughly has certain advantages. The primary purpose of advising an agency of the literature accessible is accomplished, while for others interested in the same matter, there is provided a ready-made tool.

In consequence of the natural desire of individuals to want needed publications on their desks, and because budgets will not permit following this to any large extent, it has become necessary in most agencies to find some means of controlling it. Publications essential to the work of an individual or a group are sometimes called "working copies," and the necessity is recognized of placing them in offices and laboratories. However, if there is a central control, or even a central



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record, duplication of these "working copies," or the tendency to multiply them unduly, can be kept to a minimum. Frequently if a group requiring a handbook or serial knew that there was one in the next room it would suffice, and the central record provides such knowledge to all who initiate requests for additional copies. There is an increasing tendency to place such a control or central record in the agency's library. When this is done the library usually becomes the only place in the agency through which publications can be purchased. It may then be the responsibility of the librarian to see that all individuals and groups within the agency are served as adequately as the funds will permit.

To these special library services may be added the systematic routing of periodicals, bulletins, and news releases. While routing systems in the federal libraries have few original features, the size of the agencies brings many problems. Parenthetically, the most popular of all titles routed is the *Congressional Record*, with the *Federal Register* running a close second.

*The library as an instrument of agency policy and program.* While most library users of publications such as the *United States Government Organization Manual* turn to it for brief factual information on the composition and activities of the federal agencies, it has one major feature which should not be undervalued. This consists of the statements of agency "mission" or function which are universal in government. Each federal library has prepared, revised, and prepared again for management purposes a formalized statement describing its functions.

Thus, for example, the mission statements for the Patent Office, in the Department of Commerce, together with information as to its legal authority, may be found in the *Government Manual*,<sup>5</sup> where there also is a similar statement for its library, as follows:

Scientific Library and Search Room.—A scientific library containing over 37,000 scientific and technical books, over 44,000 bound volumes of periodicals devoted to science and technology, the official journals of foreign patent offices, and over 6,000,000 copies of patents issued by foreign countries, is maintained in the Patent Office for use of the examiners and the public. A public search room, containing numerical and classified sets of patents, is maintained for the use of the public in searching and examining United States patents and their records.<sup>6</sup>

The Patent Office Scientific Library, therefore, in that it has been

created to facilitate the searching of patent literature by attorneys and inventors interested in making patent applications, acts directly as an instrument to help the Patent Office perform its mission.

Similarly the Office of Technical Services of the Department of Commerce has, as a part of its mission, responsibility to serve "as a clearing house for the collection, editing, publishing, and dissemination of scientific and technical data for the purpose of promoting economic expansion and development."<sup>7</sup> The program with which the Office carries out its responsibility is well known, and is alluded to in several of the papers in this issue.

Probably, however, the outstanding examples of federal libraries as instruments of agency policy and program are those of the United States Information Service. The Department of State may maintain two libraries in the same foreign city—one a USIS library and one in the American Embassy. These two will have collections almost opposite in subject content. The Embassy library may be full of publications telling about the country in which it is located and comparatively little about the United States. The purpose of this, of course, is to assist its staff to a better understanding of the country to which it is assigned. Since, on the contrary, the purpose of the USIS libraries is to acquaint other people with the United States and its culture, they contain publications mainly about the United States. These libraries are the theme of Lacy's paper, also in this issue.

*The Library as a factor in developing morale.* In the execution of its program it is sometimes necessary for an agency to set up an entire library system in support of morale. This is usually true whenever large groups of people are confined in areas under other than normal living conditions. In such cases the libraries perform functions similar to those which the public library discharges in the normal community—functions related to recreation, information, instruction, and inspiration. They really are public libraries for special groups, provided by the agencies responsible for the groups concerned. They provide library service, for example, on naval vessels, in army camps, and for patients in hospitals. Several of such systems are described in Mohrhardt's paper.

About seventy years ago the Congress realized that many book collections and small libraries were springing up in the federal departments in a haphazard fashion, without much thought or plan except for the needs of the moment. When appropriating \$500 for the library of the Treasury Department in 1882, an economy-minded

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Congress added, "And for the purpose of limiting the appropriations, the head of each department shall report to Congress, at the beginning of the next session of Congress, the condition of the several libraries in his department, the number of volumes in each, and duplicates in all, and a plan for consolidating the same, so that hereafter there shall be but one library in each department. . . ." At that time government departments were relatively small and compact, and some found that the collections were not large even after getting them in one place. As time passed and the federal government grew in scope and complexity, many new libraries were started, each to help implement the work of an agency or one of its subdivisions. By 1940, instead of one library, most departments had many. Most of these were highly specialized in nature, and were intended only to further the missions of the particular units of which they were parts.

In the structure of federal agencies the library is found in many different places, depending sometimes on the organizational concepts held by the administration, and sometimes on the use-relationships of the library. In a few agencies the library is a part of the research division. There has been a recent trend to place it under whatever branch would correspond to the office of the deputy chief of the agency for administration. It appears at various levels in this office, sometimes reporting directly to the head and sometimes one or two steps below. In only one instance known to the author—the U.S. Department of Agriculture—has the librarian reported directly to the head of the agency and in that Department a recent reorganization has removed the library by one step. It is a frequent pattern in technical or research agencies for the library to be one branch of a technical information office, with that unit having under its jurisdiction other branches, such as those concerned with the editorial, publication, reproduction, and public relations functions. This is actually no change in pattern, inasmuch as the technical information office is usually in the administrative department.

Since the agencies themselves are constantly realigning their organizations, either to accommodate new functions or to perform current ones more efficiently, their libraries are inevitably subject to reallocation. Not only is this a subject of continuous study by agency management sections, but it is the special topic of inquiry by outside consultants who are from time to time called in to improve efficiency. The most recent over-all survey in line with this is, of course, that of the Commission on Organization of the Executive Branch of Govern-

ment (the Hoover Commission). Enactment of its recommendations will inevitably have an effect on the organizational status of a number of the federal libraries.

One of the pronounced trends in the federal library picture since 1940 is the gathering of several libraries in a department, either by the actual combining of the collections and staff to form a single library or by establishing a close working relationship which in effect sets up a library system. Probably the first large consolidation was that of the Department of Agriculture under Ralph R. Shaw in 1942. Since that time there has been amalgamation of some, if not all, of the libraries in the Department of the Army, the Department of Commerce, the Department of the Interior, the Department of Health, Education, and Welfare, the Bureau of the Census, the Smithsonian Institution, and the Treasury Department, as well as a coordination into a system, of the libraries in the Department of the Navy. In general these unions have been of the departmental libraries in Washington.

There are also varying patterns in the relationship of the departmental and the field libraries, some of which are described in Mohrhardt's paper. In general, however, it is the exception rather than the rule for a single library authority to cut horizontally through an entire department, including the field services. In most cases the consolidation which has occurred has been of units serving the parts of a department which are physically close enough together to make the use of one central library practical. The relationship of this central library to others of the same department varies from a close one to almost none. The Department of Health, Education, and Welfare has assembled in its own building the collections and staffs of the libraries of the Social Security Administration, the Office of Education, and the Office of Vocational Rehabilitation. The resulting library maintains a branch in Baltimore to serve the Old Age and Survivors Insurance Section. In addition the departmental librarian has coordinating responsibility for the libraries of the National Institutes of Health and Saint Elizabeth's Hospital; although these have separate collections and staffs, and function within the institutions which they serve.

The trend toward the amalgamation of libraries and library-like functions of an agency is primarily for economy and increased usefulness. The two go hand-in-hand, since reduction in cost frequently makes possible added services. Figures<sup>9</sup> from the Veterans Administration libraries show that the expense of centrally procuring and cataloging publications, under their special circumstances, is much

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less than the costs would be if each individual library independently performed the same operations. In referring to central procurement, however, there is evidence to indicate that it effects economies only when the libraries for which it is used are similar and their collections tend to duplicate one another, so that one cataloging covers a number of copies, as does one purchase arrangement. Where it has been tried for libraries varying widely in types of books bought, the results have ranged from questionable to highly unsatisfactory. A further advantage in the consolidation of libraries located contiguously is that single copies of little-used but important publications will suffice, where otherwise each library might keep copies to provide for infrequent but certain demand. Often there also is an over-all saving of space and personnel.

One of the most pronounced trends in federal libraries is the active desire of the librarians to cooperate in areas of common interest. This is sometimes done through professional associations, such as, in Washington, the Professional Activities Committee of the local chapter of the Special Libraries Association. In 1952, as described in Dunbar's paper, a subcommittee of this group proposed a revision of the job-classification standards for Civil Service library positions. Another subcommittee of the same organization is at present pioneering in drafting classification standards for documentalists. There is now no series of job descriptions for persons working in documentation, when their activities do not fit into the library series. Another cooperative project under consideration by the same committee has to do with the circumstances affecting the binding of books and periodicals in federal libraries, such as cost, specifications, and speed of delivery.<sup>10, 11</sup> Federal librarians have known for years that something should be done in this matter, and many have tried individually, but this is the first time it has been attacked cooperatively.

In recent years there also have been *ad hoc* committees which have helped the libraries concerned to serve their own agencies better. One of these was the group for standardization of information services described in Mrs. Brownson's article. The improvements included a standardized format for the catalog card providing for exchangeability of product, and an agreement not to catalog another agency's reports, thus preventing much duplication of work. Another committee set up a bibliographic clearinghouse through which one library could avoid making a bibliography which was already in process in another library. While not all such cooperative projects come within the scope of this

paper, it is significant that a single agency frequently can be better served because its librarian cooperates with others in over-all plans.

It may be said in conclusion that the federal libraries both make direct contributions to the work of their agencies, and are used as instruments for carrying out larger program activities. To discharge their responsibilities, they are established in a variety of relationships which, because of the lack of agency organizational stability, are quite likely to change from year to year. Despite the wide variety of status, federal libraries can and do work out common problems by cooperative effort.

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## Public Functions

RUTH FINE and VINCENT EATON

IT IS IMPOSSIBLE to estimate the volume or appraise the value of the services which the federal libraries provide for the public. It is safe to say, however, that these services have made Washington an important world center of bibliographic service. For Washington holds what presumably is not only the greatest library in the world, the Library of Congress, but also the libraries of federal departments and agencies whose combined resources represent probably the greatest concentration of important research facilities that can be found anywhere. Organized to serve the informational needs of the government, these collections reflect the wide range of subjects and activities which come within the purview of the federal government. Through gifts and other benefactions, they have been augmented and extended to include other subject fields until now they cover virtually every branch of human knowledge.

This phenomenal growth began with the establishment of the Library of Congress in 1800,<sup>1</sup> but the greatest development has been within the last fifty years. In 1850 there were ten federal libraries, with holdings of 100,200 volumes.<sup>2</sup> Nine years later the number had grown to seventeen, having 172,729 volumes.<sup>3</sup> The 1876 report of the Bureau of Education described the facilities of thirty-three federal libraries, with resources of 656,070 volumes.<sup>4</sup> Data for 1935 indicates a total of 136 separate libraries, not including those of establishments affiliated with the federal government, whose items number 9,985,711.<sup>5</sup> There is no reliable published information on the present count and total content of federal libraries in Washington. The 1952 directory of libraries in the District of Columbia lists 136 federal libraries<sup>6</sup> and, from preliminary data submitted to the House Appropriations Committee, it is estimated that present holdings in the Washington area are approxi-

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mately 33,822,418 pieces,<sup>7</sup> not including the 30,746,772 which are reported to be in the Library of Congress.<sup>8</sup>

As federal libraries have grown in content their services to the public have shown similar expansion. Early services consisted primarily of allowing public access to the library collections. Notable broadening of this existed at the Department of Agriculture Library and the libraries of the Office of the Surgeon General (now the Armed Forces Medical Library) and the Office of Education (now in the Federal Security Agency Library). The Department of Agriculture Library, responsible by statute for acquiring and disseminating information on agriculture, has, since 1862, served the public by providing inter-library loans and answering questions, as well as by making its collection available for consultation and reference.<sup>9</sup> The Surgeon General's Library, since the days of John Shaw Billings, has been the center of information on medical literature for the country as a whole.<sup>10</sup> The Office of Education Library also has interpreted its responsibility as embracing nationwide service in the field of education,<sup>11</sup> and has made its resources available to educators throughout the country. In 1892 Congress clarified the matter of public service by declaring it to be the policy of the government to render all of its library possessions available, within certain limits, to students and responsible investigators connected with institutions of higher learning in the District of Columbia.<sup>12</sup> In 1901 it extended this privilege to the country as a whole.<sup>13</sup>

Other congressional enactments have since added substantially to the federal machinery for service to libraries and scholars. Many of these concern authorizations for programs of major significance to libraries by the Library of Congress, which will be discussed later. There are, however, two which established new agencies of particular interest to libraries and librarians. The first was the act of June 19, 1934, creating the National Archives.<sup>14</sup> The chief functions of the National Archives are to preserve the permanently valuable non-current records of the Congress, the White House, the executive departments, independent agencies, and federal courts, and to make them available to government officials, scholars, and persons having a legitimate use for them.<sup>15</sup> The records now accessible there range in date from the Revolutionary War to World War II, and are basic to research in a multitude of fields. In addition there is a library on United States history, especially the administrative history of federal agencies, American biography, and political science. Archival and



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library materials are open for public use and photoduplication services are available. Many finding lists on specific types of records in the National Archives are published, and a *Guide to the Records in the National Archives* provides a general description of its total content.

A second congressional enactment concerned libraries directly, and provided for the establishment of the Service to Libraries Section of the Office of Education. Authorized by an appropriation approved June 22, 1936,<sup>16</sup> this Section is responsible for advisory and consultation service to public libraries, school and children's libraries, and college and research libraries, and publishes statistical reports on libraries in the United States. Unfortunately, its full potential has not been realized, due to lack of administrative and financial support.<sup>17</sup>

Significant recent improvements in the distribution of public documents and in indexing, while not a part of the public services of federal libraries, may appropriately be mentioned. The distribution system to depository libraries has been adjusted to meet the varying needs of small and large libraries, and various congressional publications not previously sent to depositories have been added.<sup>18</sup> There has also been progress in the *Monthly Catalog of United States Government Publications*. These comprise increased coverage of processed materials, inclusion of noncurrent declassified reports, speed-up in reporting, and the addition of a semiannual listing of periodicals.<sup>19</sup> While the distribution of documents and indexing undoubtedly will continue to involve problems for libraries, such improvements indicate the readiness of the government to attempt greater efficiency in meeting library needs.

Improvement and extension of federal library services have been the concern of professional librarians for many years. The Joeckel recommendations of 1938,<sup>20</sup> those prepared by the same author for the American Library Association Committee on Postwar Planning,<sup>21</sup> and those contained in the Library of Congress Planning Committee report offer useful guidelines. The main features of these proposals concern the strengthening and extending of the bibliographic, reference, interlibrary loan, abstracting, translating, and cataloging and classification services of the Library of Congress and other federal libraries; greater assistance to libraries throughout the country; and coordination of federal library activities and programs by such machinery as a Federal Library Council. There have been other recommendations dealing specifically with the work of the Armed Forces Medical Library<sup>22</sup> and the Department of Agriculture Library.<sup>23</sup> An

examination of current public services performed by the three national libraries, and by typical federal department and agency libraries, indicates the extent to which some of these recommendations have been fulfilled.

Primarily, as its name implies, the Library of Congress operates on behalf of the Congress and the government of the United States, but over and beyond this it performs a vast range of services for the American library system as a whole and for the people of the nation. Probably the largest library in the world, it has "more than 9,500,000 volumes and pamphlets . . . nearly 13,000,000 manuscripts, more than 2,100,000 maps and views, about 2,225,000 photographic negatives, prints, and slides, nearly 2,000,000 pieces and volumes of music, some 500,000 fine prints, as well as newspapers, motion pictures, recordings, and many other types of material."<sup>24</sup> It is, indeed, an aggregate of great libraries, with the largest existent collections of music, aeronautical literature, and cartographic materials; the most comprehensive gathering of manuscript sources for the study of United States history to be found anywhere except in the National Archives; and the most extensive collections of Chinese books and manuscripts, Japanese-language materials, Russian books and pamphlets, and modern Hebrew literature outside of the countries where they were produced.

Though many of its everyday readers come from schools and universities in the Washington area, the use of the Library's collections is on a national rather than a local scale. From all over the country arrive scholars and seekers of information, to enlarge their knowledge, track down facts, and gather material for books. There are twenty-one general and special reading rooms set apart for music, law, government publications, periodicals, and other fields and materials of investigation. Persons doing extensive research can obtain study rooms or study tables to serve as bases of operations during the length of their stays, and can secure advice from staff consultants and experts in American history, Orientalia, Slavica, Hispanic literature, and many other subjects.

Though it is not a circulating library, its collections are drawn upon considerably through the interlibrary loan system; during the fiscal year 1952 it answered calls for material from 1,520 libraries throughout the United States. Supplementing, or rather augmenting, interlibrary loans, are photoduplication facilities by which all material not subject to copyright or other restrictions can be reproduced for the general public. To the extent that its obligations to Congress and the

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government allow, the Library also answers requests for information from all over the nation; nearly 50,000 such inquiries were handled in the last year.

A special activity centered in the Library of Congress is the selection, procurement, and circulation of books for the blind. Through a network of twenty-eight regional circulating libraries it provides books in Braille and Moon type, and talking books (books recorded on phonograph records), to the sightless in the United States, its territories, and insular possessions.<sup>25</sup>

Card production is bibliographically the most important enterprise at the Library of Congress, and the one that has had the greatest effect on the practices of other libraries. At present there are more than 8,000 subscribers to the service, purchasing more than 20,000,000 cards a year. The gains achieved by the standardization of cataloging form, and the economies realized for individual libraries by the availability of premanufactured cards, have been enormous. Cooperative cataloging, through which other libraries catalog books and supply the Library of Congress with copy for editing and printing, has contributed greatly toward perfecting bibliographic control over the book holdings of the nation.

In recent years a series of publications employing the Library of Congress printed cards has furnished important new tools for the library profession, namely, the *Catalogue of Books Represented by Library of Congress Printed Cards* (1942), and its *Supplement*. The *Library of Congress Author Catalog* and *Library of Congress Subject Catalog* reproduce cards that are currently being printed and provide a broad survey of recent publications.

The National Union Catalog, with more than 12,000,000 cards showing where books may be located in the United States, is the most fundamental bibliographical tool in existence. The Library of Congress also maintains a Cyrillic Union Subject Catalog, showing at what points Russian, Bulgarian, Servian, Ukrainian, and White Russian publications can be found elsewhere; special Hebraic, Chinese, and Japanese union catalogs; and the American Imprints Inventory (originally compiled by the Work Projects Administration), recording books and ephemera printed in the United States before 1876. Proposals to publish the National Union Catalog have been under discussion between the Library of Congress and the American Library Association; and the microfilming of the Catalog—achieved last year—has made it possible for libraries to obtain copies of portions of it for their own use.

The publications of the Library of Congress are extensive and varied. Those of particular importance as technical aids for the library profession are its classification schedules; its lists of subject headings; its rules for descriptive cataloging, which now are being adapted to cover motion pictures, filmstrips, phonorecords, and other nonbook materials; and its lists of current acquisitions. Among the latter, in addition to those already mentioned, are the *Catalog of Copyright Entries* (covering books, pamphlets, periodicals, dramas, works of art, motion pictures, and other copyright deposits), the *East European Accessions List*, the *Monthly List of Russian Accessions*, the *Monthly Checklist of State Publications*, *New Serial Titles*, and *Southern Asia: Publications in Western Languages, a Quarterly*.

These are augmented by many bibliographies, guides, and indexes in special fields. Their diversity is indicated by the following samples of titles issued in the past few years: *American History and Civilization—A List of Guides*; *The Arabian Peninsula*; *Introduction to Africa—A Selective Guide to Background Reading*; *Manchuria*; *Motion Pictures, 1912-1939*; *Bibliography of Periodical Literature on the Near and Middle East*; and the *United States Quarterly Book Review*.

The Armed Forces Medical Library provides a comprehensive collection of world literature in the medical sciences. Its resources are available for public use, and reference and bibliographic assistance is given either directly or by correspondence. Through interlibrary loans it extends the usefulness of its holdings, and when loans are not practicable free photoduplication service is provided. It maintains a union catalog of medical pictures, and aids other libraries in locating pictures not in its own collection. Since 1880 it has published the *Index Catalogue*, a basic medical bibliography. More recently it has begun the publication of *Current Index to Medical Literature*, a monthly index of articles in professional journals. Its technical services to libraries include the development and publication of a classification for the medical sciences, and the annual issue of an *Author Catalogue*, representing additions to its card catalog for the year. Currently it is preparing for publication a list of subject headings for medical literature.

Other specialized libraries in the medical field are that of the National Institutes of Health and the Veterans Administration Medical and General Reference Library. The former is strong in the areas of biological science, pathology, public health, and sanitary engineering. It issues a monthly list of accessions which is a useful device for informing research workers of newly appearing materials. The Veterans

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Administration collection emphasizes medical care and hospital administration, and issues selected bibliographies of resources in its field of interest. Both libraries are open to the public and both make their materials available through interlibrary loan.

The Department of Agriculture Library maintains a comprehensive research collection covering all aspects of agriculture in this country and in foreign countries. As already indicated, its collection long has been available for public use either directly or through interlibrary loan, and now provides photoduplication service. Fifty per cent of its annual inquiries, which are estimated to be nearly two million, come from students, research workers, farmers, businessmen, and others throughout the country.<sup>26</sup> It issues comprehensive and selective bibliographies on a wide variety of subjects pertaining to agriculture, and since 1942 it has published the monthly *Bibliography of Agriculture*, covering the literature on agriculture received by the Library from over the world. It does cooperative cataloging for Department of Agriculture publications, and aids agricultural and other libraries by filling gaps in their collections from its surplus and duplicate materials. Especially worthy of mention are its experiments in the use of various photographic techniques and in devices for simplifying and speeding performance of library operations, and its leadership in applying scientific methods to library routines. Its procedures have been widely studied by other libraries.

The scientific libraries of the federal government are especially strong, and are used extensively by industry, scientists, inventors, and engineers. In their group are such notable collections as the Smithsonian Institution Library, Patent Office Scientific Library, and the libraries of the National Bureau of Standards, the Geological Survey, the Coast and Geodetic Survey, and the Weather Bureau. The Smithsonian Institution Library is outstanding for its complete files of proceedings of learned societies throughout the world, and for its scientific and technical journals. The greater part of its holdings are on deposit at the Library of Congress; but the 250,000-volume working collection, which has been retained at the Institution, contains important monographs as well as a complete file of United States scientific publications since 1858. It is open for public use either directly or through interlibrary loan. Photoduplication service is available for materials which cannot be borrowed.

The Patent Office Scientific Library, established in 1836, is the center for patent research in the United States. Patent attorneys, inventors,

and scientists depend upon its comprehensive series of American and foreign patents and its files of scientific and technical journals. The National Bureau of Standards Library excels in materials on the basic and applied sciences. Its public clientèle is primarily industrial research departments and laboratories. It receives inquiries from all over the country, and the volume of its correspondence is impressive. The materials it contains are available through interlibrary loan and photoduplication.

Smaller collections in more specialized areas of science also provide important public services. Typical of these is the library of the National Advisory Committee on Aeronautics. In its collection are found research reports and technical papers on all aspects of aeronautical engineering. It issues current abstracts on important developments in the field, and publishes a detailed index to the reports of the National Advisory Committee on Aeronautics. Its correspondence is large, and its inquiries come from every segment of the population. In addition, it serves the country as the central distribution agency for all official reports on aeronautical research published by the British government.

The Office of Technical Service in the Department of Commerce, with duties defined by an act of Congress approved September 4, 1950,<sup>27</sup> is one of the newer agencies serving industry and scientific research workers. Its function is to make available as quickly as possible the results of scientific work being carried on by the government. Its bibliographic and abstracting services are discussed in greater detail in another article in this issue. The Atomic Energy Commission Library, though not open to the public, answers innumerable requests for information which reach it through correspondence, and supplies AEC reports and other materials on interlibrary loans. Its *Nuclear Science Abstracts*, a semimonthly publication which lists and abstracts current literature, is an important new reference tool for scientists. Through arrangements with the Office of Technical Services in the Commerce Department, copies of its unclassified reports are available for purchase. A separate list of these reports is also issued by the Office of Technical Services to acquaint interested research workers with available materials.

For geographical research and for study of the development of natural resources there are a number of libraries whose collections are rich in relevant materials. The Geological Survey Library, established in 1882, is pre-eminent in the geologic sciences. Its files of official reports on the geology of all countries, and its holdings of proceedings

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and monographs of societies, universities, and research institutions in its field, are the most extensive of their kind in America. They are available to the public either directly or through interlibrary loan, and the Library supplies information in response to inquiries from all parts of the country. It publishes the biennial *Bibliography of North American Geology*, an important reference tool. The Coast and Geodetic Survey Library dates back to 1832 and contains highly specialized materials on geodetic astronomy, nautical and aeronautical cartography, geodesy, geomagnetism, seismology, oceanography, and tidal phenomena. The collections of the library of the Weather Bureau on climatology, meteorology, and hydrology, and its large and unique files of weather maps of the United States and foreign countries, are the largest anywhere. Both of the last-named libraries make their materials available to serious investigators.

The Department of Interior Library emphasizes natural resources, mining, metallurgy, land reclamation, and conservation. In it are centralized the specialized possessions of the former Bureau of Mines Library and the former library of the Fish and Wildlife Service. It issues a monthly list of current accessions which includes official publications, monographs, and periodical literature. Its facilities are open to the public, and interlibrary loan and photoduplication services are provided. From its duplicate government documents it supplies responsible users and libraries with many publications relating to natural resources which are out of print. The importance of these and other federal library materials for geographical research is emphasized by Arch Gerlach in a recent article describing the collections of thirteen federal libraries.<sup>28</sup> Referring to the findings of a 1945 survey of institutions considered best equipped to meet the needs of geographers, he notes that six of the twenty-two libraries of the country used most frequently were federal libraries in Washington.<sup>29</sup> The Library of Congress ranked first as a center of geographical research; the library of the Department of Agriculture fourth.

The interests of labor and public welfare are represented in the collections of the Department of Labor Library and the Federal Security Agency Library. The former has probably the country's largest and strongest collection on all aspects of labor economics, and is the source to which scholars and representatives of trade unions, employers' associations, and industrial relations centers turn for information in their field. It contains both American and foreign source materials, and is especially strong in the publications of trade unions and

official reports of government labor agencies, of all nations. The files it contains of labor newspapers issued in the United States are probably the most complete in the country. Its facilities are available to the public, and it provides interlibrary loan service and answers many inquiries by mail. The monthly list of accessions issued by it is of particular value to those who need to keep informed of current book and periodical literature pertaining to labor.

The Federal Security Agency Library specializes in materials on public welfare, social insurance, and education. It includes the excellent collection on education contained in the former Office of Education Library, the child welfare materials formerly in the Labor Department Library, and the social insurance literature of the former Social Security Administration Library. Its files of state and federal legislative matter dealing with social insurance, education, and public welfare programs are particularly strong, and it prepares useful digests on legislative developments in these areas.

For the research worker in economics and trade development there are important working collections in the Department of Commerce Library, the Tariff Commission Library, and the libraries of the Federal Reserve Board, the Federal Trade Commission, and the Office of Defense Mobilization (formerly the National Security Resources Board Library). The last is especially useful for its files of official reports of the emergency agencies of World War II, and for its materials on military, industrial, and civilian mobilization.

The Department of State Library assists scholars and students seeking bibliographical information on foreign countries, and on their peoples and their political, economic, social, and cultural status. Its collection includes important sources on international law, diplomacy, history, and foreign relations. Through interlibrary loan, and through special subject bibliographies and its fortnightly *Soviet Bibliography*, which covers significant publications in the English language dealing with Soviet foreign policy, economic conditions, and social developments, it extends the usefulness of its resources to responsible investigators in these areas.

In public personnel administration and public management the libraries of the Civil Service Commission, the Bureau of the Budget, and the Municipal Reference Service of the Bureau of the Census Library provide excellent working collections which are available for public use and interlibrary loan. That of the Civil Service Commission has, in addition to its general collection on personnel administra-



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tion, historical matter on the civil service movement, and a large file of legislative histories of congressional proposals affecting federal civil service. It has developed and published a special scheme of classification for public administration materials which has useful applications for similarly specialized libraries.<sup>30</sup> A *Bibliography of Public Personnel Administration Literature*, which it first issued in 1949, and since has kept up to date by annual supplements, provides a systematic coverage of literature on this subject. It also issues the monthly *Personnel Literature*, which reports current new materials.

The collection of the Bureau of the Budget serves the needs of budget and administrative analysts, and contains, in addition to basic materials on public administration, related studies from the field of industrial management, as well as official documents on the structure and operations of government at the federal, state, and local levels. Administrative histories of federal wartime and emergency agencies and extensive files on federal reorganization plans, including the unpublished Hoover Commission reports, provide valuable research materials for students of government. Special subject bibliographies and a monthly list of accessions, *Public Management Sources*, are issued as guides to literature in the field.

Another service which contributes to the flow of information to the public is the Municipal Reference Service of the library of the Bureau of the Census. As a depository of official and nonofficial materials on state and local government, it maintains files of recurrent reports from the forty-eight states and from five hundred cities and selected counties, townships, and special districts. By virtue of detailed classification and indexing of these reports the library can be said to serve as a municipal reference library for the country. Its publications include: *Checklist of Basic Municipal Documents*, *City Periodic Financial Reports*, and *State Periodical Publications on Financial Statistics of Local Governments*.

From this recital of resources and services it is apparent that federal libraries, in the course of their normal work operations, have developed facilities which are increasingly being placed at the disposal of the public. Bibliographic and technical services of the Library of Congress are moving toward the goals outlined by professional library groups, and cooperative relations of all federal libraries with libraries throughout the country have been strengthened. Although there is no formal organization for directing and coordinating the activities of the federal

libraries, their services have increased in value and importance, not only to the federal government but to the country at large.

However, realization of the hope that "these services should be offered as a planned program of assistance to libraries—not merely as by-products of the normal functions of federal libraries," probably is remote.<sup>31</sup> Present growth has been made possible through informal arrangements. Even formal organization would not in itself offer assurance of greater and more rapid achievements. These rest rather with "political value judgments, concerned . . . with the relative priorities of social services."<sup>32</sup>

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## National Systems

FOSTER MOHRHARDT

"THE LIBRARY HAS followed the Federal Government as its functions have expanded into widely distributed field services. Although by no means so extensive as the library system in Washington, these libraries in the field are of special importance because of certain questions of policy that arise in their administration."<sup>1</sup> This was Carleton B. Joeckel's recognition some fifteen years ago that a new type of library system of "special importance" was developing. Actually, he was viewing these field activities at a point midway in their evolution, since they had had their beginnings about fifteen years earlier at the close of World War I. Whenever an agency has operated on a geographical basis or through scattered offices, there has been a tendency to create library services on a nationwide scale.

Some of these field libraries have been developed into what are here designated as "federal library systems," that is, library organizations with numerous professionally supervised branches in diverse geographical areas, controlled by a central office. The federal agencies having such systems are: Department of Agriculture, Department of the Air Force Special Services, Department of the Army Special Services, Department of the Navy Special Services, Veterans Administration Special Services, and Department of State Division of Libraries and Institutes. The State Department libraries are covered elsewhere in the present issue of *Library Trends*, and will not be treated in this paper.

Some of the basic facts necessary for comprehension of the systems in question are summarized in the Joeckel study of federal libraries. This states: "With two important exceptions the libraries of the Federal Government are not independent agencies but are organic parts of the governmental units they serve. They are not branches of a unified national library system but are subordinate units in departments, The author is Director of Library Service, Special Services, U.S. Veterans Administration.

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bureaus, or independent offices. The Federal libraries are controlled and administered by the agencies they serve. . . . In other words, the services rendered by most of the Federal libraries are not regarded as ends in themselves but as auxiliary to the general objectives and functions of the various governmental agencies. It follows that library organization in the Federal Government is complex and loosely knit in precisely the same degree as the structure of the Federal Government itself."<sup>2</sup>

This recognition of federal libraries as "organic" units, "auxiliary" to the objectives of the agencies, is necessary for an understanding of their constantly changing organizational patterns. Most of the alterations result from necessity to conform with basic agency changes. These may reflect new objectives, or they may be merely structural realignments. Consequently, the accuracy of identification of trends in the library systems depends upon the observer's familiarity with the agencies and also upon his general knowledge of federal libraries. In order to assist both the reader and the author in reaching a perspective, this paper has been organized into two main parts. The first presents a synoptic view of the library systems. The second identifies and evaluates general and specific tendencies.

Separate libraries have existed from the early days of organization in most of the agencies. Library systems, centrally controlled, however, are developments of the past thirty-five years. Most intensive has been the growth during the past fifteen years. This fact, plus a neglect of the field by library authors, necessitates the accumulation of data from personal rather than printed sources. Whenever possible, the facts have been checked for accuracy with departmental records. Discussion of the agency libraries below is limited to the "library systems" in these agencies, and in time to the years during which a centralized system grew up and reached its present form. No attempt is made to present a complete picture, nor the details of service. Reference is made at the beginning of each section, however, to sources of additional information on the libraries covered.

*Department of Agriculture Library.*<sup>3</sup> Motivation for the development of a library system was given in a memorandum of the Secretary of Agriculture dated November 6, 1940, which directed "the librarian to knit together the far-flung library facilities of the Department into a single strong library system."<sup>4, 5</sup> This memorandum indicated that the Department librarian would be responsible for (1) general supervision and field coordination, (2) organization of the bureau libraries

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as part of the Department library, (3) review of all applications for library positions in Washington and the field, (4) review of all books and periodical orders, (5) conducting of periodic examinations and evaluations of all library services in the Department of Agriculture. It was recognition by the Secretary that proper library service was not provided to the bulk of Agriculture employees, since three-fourths of the total employees were located outside Washington. As reported at the time, immediate steps were taken to set up a field system, viz., "The plan agreed upon is one of dynamic flow of material rather than the static method of multiplying inadequate bureau libraries in the field." <sup>6</sup> In June 1941, the library was organized on the following divisional lines: Division of Technical Processes, Division of Bibliography, Division of Reading and Reference Services, and Division of Field Library Services.

Three types of field libraries were then developed. Branches of the Department library served the departmental personnel in a region. Sub-branches took care of all departmental staff in one location. Stations served the staff of one bureau on a part-time basis, without a full-time trained librarian. The first branch was opened in 1941, and at the peak in 1945 there were 9 branches, 14 sub-branches, and 11 stations. As of 1953 field libraries are only classified as branches or stations, with 13 branches and 12 stations. Extensive studies have been made to determine the practicability of providing such field service under contractual arrangements with state agricultural colleges. It is now indicated that it is less costly per unit of service for the Department to provide it contractually rather than through its own branch libraries, but that service of somewhat lower grade results.

The impact of World War II showed that the library organization was sound and able to meet the variety and volume of demands it had to meet. The ensuing sentence from an annual report pointed out, however, that the union of the Department's libraries was accelerated by the war: "In order to meet the greatly increased demands, all libraries of the Department were consolidated in the Department library under Executive Order No. 9069 and Secretary's Memoranda 973 and 973 Supplement 1." <sup>7</sup> Regulations for all Agriculture libraries are now summarized in U.S. Department of Agriculture Administrative Regulations, Title 2—Library, August 1, 1952.

Twelve years have produced a strong, centrally managed system, consisting of a main library collection supplemented by 25 field libraries serving every segment of the Agriculture Department in all

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parts of the country. This is the most closely knit and centrally administered of all federal library systems. The main office is responsible for establishing policy, general standards of performance, procedures, allocation of funds, selection of staff, coordination of reference and bibliographic effort, procurement of reading materials, and supervision. The organizational pattern is shown in Figure 1.

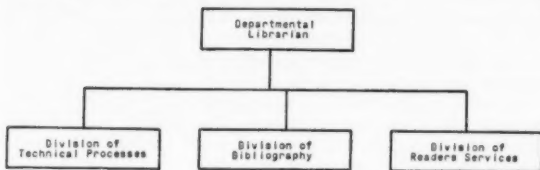


FIGURE 1

This library differs from all the other systems in that it concentrates on furthering research and education in the Department, and has no responsibility for leisure or recreational reading. Field services are included organizationally under the Division of Readers Services.

*Department of the Air Force Special Services Library Service.*<sup>8,9</sup> Library service to Air Force as well as Army personnel was provided under the general supervision of the Army Library Service up to 1944, when separate provisions for the Air Force were set up. Within the Air Force structure the function of the central library office is primarily a staff activity, with few operating responsibilities. Figure 2 shows the scheme in effect.

Three general aspects are authorized as follows: (1) a general service for all members of the Air Force, providing a reading program

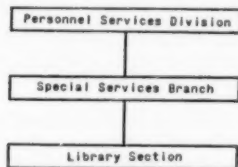


FIGURE 2

which assures a balanced collection of books in all fields and affords an opportunity for the creative use of leisure time; (2) technical and educational activity, providing publications in the fields of aeronautics and related subjects, military science and tactics, research and development, and other subjects related to the mission of the Air Force; (3) legal aid, i.e., supplying law books and publications needed in legal activities.

The headquarters library office of the U.S. Air Force provides policy direction and broad staff supervision for all three phases of library service. However, the actual supervision of libraries within a Command is the responsibility of the Major Air Commander. The USAF is composed of Commands which are responsible for assigned duties, such as training, research and development, materiel, and education. These often overlap each other geographically, although not functionally. Several libraries may be located in one area, yet may be serving different functional commands. General library policies apply to all, but operational responsibilities and determination of the extent of service remain within the control of the Command.

Although the paper organization<sup>10</sup> represents a complete operating unit, the innate nature of decentralized authority in the military leaves primarily policy-forming, staff-supervising, and budget-reviewing activities to the Air Force centralized library agency, as contrasted with those of line-authority organization. Central responsibilities currently discharged are: (1) providing policy for all Air Force libraries; (2) procuring basic book collections for new stations; (3) selecting and purchasing monthly book kits, paperbound kits, and magazine kits for distribution to base libraries; (4) monitoring the technical book supply program; (5) establishing personnel standards and participating in recruitment and placement; and (6) supervising staff.

The central office provides more operating assistance to the general than to the technical libraries. The latter, because of their specialized and individualized requirements, determine locally their operational needs and procedures. The general libraries reach every element of the Air Force. Libraries are found in all parts of the world at the levels of airstrip, base, camp, depot, field, hospital, squadron, and unit.

Here, as in the Army, recognition of the need for library service is shown by the top command. However, due to the military type of organization, centralized control is acceptable only when it simplifies station activities and when it does not conflict with the prerogatives



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of the base commander. Although general policies can be established, kits of books selected and distributed, basic collections furnished, and recruitment assistance provided, a completely integrated system cannot be operated unless there is strong central responsibility and control.

*Department of the Army Special Services Library Service.*<sup>11</sup> The American Library Association and numerous volunteer groups cooperated to provide a nucleus for the development of an Army Library Service during World War I, and to give an impetus to it. During and following the war some centralized library activities were carried out and lasted until about 1924, when the director resigned and the Army "generally let the library service fall into disuse. For the most part, it became merely a gesture."<sup>12</sup>

Preparations for World War II, an expanding Army, and the reorganization of the Armed Forces stimulated the revitalization of the Army Library Service. It should be recognized, however, that Army organization, with its decentralization of authority and responsibility to field level, does not permit the growth of strong single control. Jamieson indicates this clearly in his book on the development of the Army Library Service, as follows:

The army command system, geared for combat, in which it is necessary for field commanders to make spot decisions, does not grant such authority to the War Department chief of a minor activity. Authority is decentralized to the commander in the field. The War Department ordinarily gives him only the most general instructions. It tells him what he is there for, but not how to do it. At most it requires him to assign specialists to his staff who have certain kinds of technical knowledge which may be helpful to him. Thus, the service command librarians and the theater library officers worked for their own chiefs, the service command and theater Special Services officers, and not for the chief of the War Department Library Section. It should be clear, then, that during the war the Army Library Service did not have a single controlling head with authority to establish policies and to direct that they be carried out. It was contrary to army policy to have a chief army librarian. There was only a War Department representative of the Army Library Service."<sup>13</sup>

It was probably Jamieson's intent in the last sentences to indicate that the Army did not have an individual with authority comparable to that of a university librarian or the director of a municipal library system. The Chief of the Library Section of the Army did have policy-

making power, but he could not direct that the policies be carried out. To the nongovernmental librarian, this might well present a very discouraging picture. However, within this limiting framework, it was possible for an ingenious staff to provide centralized guidance and service from a central office.

Centralized library activities which were initiated in 1940 and which have been continued are: (1) recommendations for post libraries to commanding generals; (2) allotment of funds for personnel and reading materials; (3) preparation of manuals for procurement, property-management, procedures, and records; (4) establishment of basic collections; and (5) guidance in library design. Few changes have been made in the library organizational pattern since 1940.<sup>14-16</sup> Recently it has been separated from Recreation Service, which should add emphasis to library activities. In the past, those with ultimate responsibility for libraries have been men with training in fields other than librarianship.

The Army Special Services library program is supported from two sources: (1) appropriated funds made available by the Congress; (2) nonappropriated funds made available from the profits of post exchanges, movies, and the like. Because of differences in the derivation of money for the procurement of books, complete centralized purchasing is not possible. Books bought from nonappropriated funds are ordered locally from sources determined by the local nonappropriated fund custodian or treasurer.

*Department of the Navy Bureau of Naval Personnel Library Services.*<sup>17</sup> Although library provisions for men ashore and afloat have been made since the early days of the Navy, a centrally administered service has existed only since World War I. The central office controls over 1,600 shipboard and station units, staffed by more than 100 professional civilian librarians. Navy Regulation 0441 places this vast system under the Bureau of Naval Personnel Technical Control, giving it responsibility for "library service for the Navy and Marine Corps, exclusive of the technical and professional requirements for other bureaus and offices."<sup>18</sup>

The mission of the Library Services Branch is to develop and administer a program of library service for the Navy afloat and ashore, including the Marine Corps. The libraries provide for the general informational needs of each ship and station, supporting the education and training and supplying books for leisure-time reading. Functions of the central office include:

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(1) Formulation and implementation of plans, policies, and standards.

(2) Budgeting. Recommendations and justification of book funds for the library program. (For some activities, appropriated funds are supplemented by local nonappropriated funds.)

(3) Administration. Establishing practices and procedures for field libraries. Professional guidance to librarians and responsible officials in field activities, through correspondence and visits by bureau and district librarians.

(4) Book reviewing, selection, and distribution. Selection, procurement, and distribution of current publications and books of particular interest to naval personnel. (Actual purchase is by Navy purchasing offices.) Maintaining and controlling library book stocks at Naval Supply Centers at Norfolk and Oakland.

(5) Upkeep of basic library collections for ships and stations. Selecting and issuing and commissioning libraries for each ship and station, and keeping these collections up to date by replacements.

(6) Direction of personnel. Analysis of the need of the shore establishments for professional civilian librarians, and recommendations as to the qualifications for such personnel, and the number required. Professional guidance and assistance in selection and appointment of librarians to field activities, promotions, transfers, etc.

(7) Maintenance of auxiliary collections. Five libraries contain specialized books which are not duplicated in the many small ship and station collections, and do largely a mail-order business.

(8) Provision of district librarians. These act as field liaison representatives at nine commands.

This centralized Navy library service is exclusive of the requirements of bureaus and offices of the Navy Department, and such libraries as are otherwise appropriated for, i.e., the Naval Academy Library at Annapolis and the Naval War College Library at Newport, Rhode Island. Naval technical and research libraries are thus not under centralized appropriations or control. Recently the technical libraries in the Washington area, however, have been placed under the general supervision of a "Coordinator of Navy Libraries."

In summary, it may be stated that centralized control is exercised only over the numerous general libraries. It is specified as (1) management—budget, etc., and (2) technical—professional guidance, standards, supervision, and centralized book selection.

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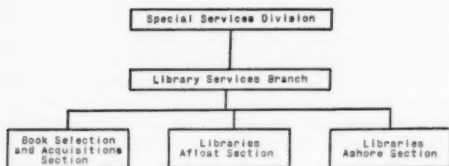


FIGURE 3

The general pattern of organization is shown in Figure 3.

*Veterans Administration Special Services Library Service.*<sup>19-21</sup> Coincident with the organization of the Veterans Administration as the Veterans Bureau in 1922, was the establishment of a strong centralized office for the control of all field libraries. Libraries had been an integral part of the soldiers' homes since their establishment in 1868, and libraries had been started in 1918 by the American Library Association in those war hospitals that later became part of the Veterans Administration. From 1922 until 1945, the influence of the central office was mainly felt through printed regulations, personnel management, and allocation of funds. General policies were established, budgets prepared, librarians assigned to positions throughout the country, and reviews prepared for field use. Thus it is evident that more than a nucleus of a centralized library system was in operation. Building on this base, greater centralization of library activities was inaugurated in 1946 with the expansion and reorganization of the Veterans Administration. All field library activities were studied to determine the repetitive operations that might be more efficiently conducted at a central location. Book reviewing, book ordering, classification, and cataloging were transferred to Central Office, in order to free field librarians from these duties and enable them to increase their service to patients and staff.

Centralized responsibilities of the Veterans Administration library service are: (1) policy and plans, (2) procedures, (3) book and periodical contracting and procurement, (4) screening of new books and issuance of a book-review publication, (5) classification and cataloging, (6) a reference center to answer difficult and involved questions, (7) a bibliographic clearinghouse to prevent duplication of field effort, and (8) supervision of field operations.

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Although such activities were greatly strengthened in the new organization, two elements were decentralized. Quite properly, the duty of selecting materials for the local collections was delegated to the local librarians, with Central Office acting as an order center. It was also determined to place the responsibility for personnel placement at the local level. In filling field library vacancies, it is not necessary for the hospital to consult with Library Service, Central Office, on either the availability or suitability of candidates.

*Other government field libraries.* Various other agencies have field libraries which are connected in some way with a central Washington office library. The Bureau of Prisons of the Department of Justice maintains libraries, some under professional supervision, in federal prisons throughout the United States. These compose a system, with several services and controls from a central point.

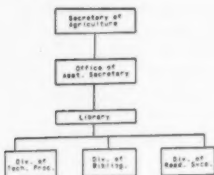
Field libraries are also kept up by various judicial units of the federal government. For instance, the Tax Court of the United States and the various district and circuit courts are maintaining such agencies. Likewise, there are hospital and medical libraries in Public Health Service hospitals throughout the country. These, like the judicial libraries, are decentralized, and lack the strong unified control found in a system.

Figure 4 and Tables 1-3 describe further the systems and services treated above. They aim to bring out the pattern or patterns of uniformity in the several systems. Figure 4, "Organizational Placement of Library Systems," provides a picture of the placement of library service within each agency. Table 1, "Summary Comparison of Centralized Activities," breaks down the important elements in centralized operations, showing the extent of centralization in each case. Table 2, "Statistical Summary," gives an estimate of the large segment of the total library picture that these five systems occupy. Table 3, "Extent and Limitations of Centralized Library Service in Agencies," shows the elements within the agency which come within the purview of the library system, and also the types of library service that operate independently of the system.

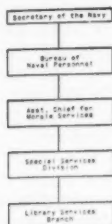
Attempting to summarize trends in federal library systems is somewhat like trying to identify the passengers in a fast moving train as it passes. Compared to university or public libraries, their pattern of alteration is kaleidoscopic. During the three months immediately preceding the completion of this article, changes in some degree have been made or considered in most of the libraries here described. Two sys-

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## IV. DEPARTMENT OF AGRICULTURE



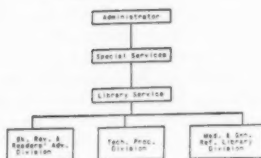
## IV. DEPARTMENT OF THE NAVY



## IV. DEPARTMENT OF THE AIR FORCE



## V. VETERANS ADMINISTRATION



## IV. DEPARTMENT OF THE ARMY

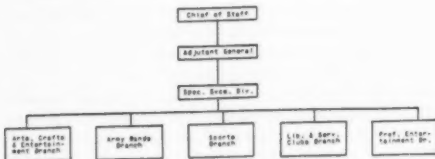


FIGURE 4

*Organizational Placement of Library Systems*

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TABLE 1  
Summary Comparison of Centralized Activities \*

Activities	Agricul- ture	Air Force	Army	Navy	Vet. Admin.
Plans and policies	✓	✓	✓	✓	✓
Budget and allotments	✓	✓	✓	✓	✓
Technical processes					
Book review					
Reviews prepared for field	—	✓	—	✓	✓
Primary selection made for field	—	✓	✓	✓	—
Procurement					
Contracting authority	✓	—	—	—	✓
Ordering activities	✓	—	Some	✓	✓
Distribution of materials	✓	✓	—	✓	—
Basic collections provided	—	✓	✓	✓	✓
Classification and cataloging					
Centralized classification	✓	—	—	Some	✓
Centralized cataloging	✓	—	—	—	✓
Readers Services					
Extensive reference assistance	✓	—	—	Some	✓
Coordinated bibliographical program	✓	—	—	—	✓
Personnel					
Standards	✓	✓	✓	✓	✓
Active recruitment	✓	✓	✓	✓	—
Evaluation of applicants	✓	✓	✓	✓	—
Actual appointment	✓	—	—	—	—
Supervision					
Performance standards	✓	✓	—	✓	✓
Regional supervisors	✓	✓	✓	✓	—
Field inspections	✓	✓	✓	✓	✓

\* Activities checked are those centralized in each case.

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TABLE 2  
*Statistical Summary, Fiscal Year, 1952 \**

	Agriculture	Air Force	Army	Navy	Veterans Adminis.
Annual circulation	1,350,164	5,000,000	7,806,960	—†	13,315,470†
Total volumes	1,200,000	2,262,000	2,707,791	—†	1,537,565
Number of libraries					
Regular libraries	26	211	532	—†	225
Small or deposit collections	—	3,166	647	—†	320
Total library units	26	3,379	1,179	1,600	545
Total number of professional personnel	62		384	100	436

\* These are approximate figures and do not represent official agency data.

† Information not available.

‡ Includes recorded circulations of books and magazines.

TABLE 3  
*Extent and Limitations of Centralized Library Service in Agencies*

Government Agency	Direct Service	Independent Operation
Agriculture	All elements	
Air Force	Active field units	
Army	Active field units	Medical Technical U.S. Military Academy Service Schools Administrative Libraries U.S. Naval Academy U.S. Naval War College
Navy	Fleet ashore and afloat	Technical Medical Research Bureaus Legal libraries
Veterans Administration	Patients Medical and other staffs	

tems have shifted their position within the agency organization. One anticipates a major move. One has adjusted to minor changes in agency-wide policy. Not one of the revisions is made in the interest of improved library service. All stem from the constant need to conform to agency arrangements. They are not political, nor do they spring from political impetus, but result from the continuous process of adaptation in government operations. It is therefore essential that



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a library system of this type, if it is to maintain a measure of permanency, be organized on a flexible basis. Policies must be general enough to cover all possible alterations; procedures must be rigid only to a limited degree; centralized operations must be restricted to areas in which they are essential and will be least affected by agency changes.

The general planning in the beginning for each of the systems has contemplated an integrated, closely controlled operating unit. Usually, however, as the proposals clear through the many offices that must give concurrence, there is a repeated weakening of even the structural pattern. Then as the scheme is gradually put into effect, distance from a central control and the prerogative of field authority begin modifying the paper outline. The actual operating library system emerges from the process as an unrecognizable child of the parent. This, however, is not to imply a criticism of the end product, since often it emerges stronger and more practical because of the vigorous evolutionary period. Fortunately, the policy-making function is least apt to be questioned or changed. A trend is evident toward strong, centrally controlled responsibility for policy.

There is a discernible tendency to provide unified library service to all elements of the organization only in those agencies which have vigorous central controls. Where there is a good measure of decentralized authority, with field responsibilities organized on functional as well as geographical lines, there generally is a multiplicity of library services. In such units determination of activities for a specific library service may depend upon local decisions.

Most agencies recognize the chance of overlapping in responsibility, and have established definite nationwide areas of authority for library systems. These determinations are issued as official agency regulations, and establish clear functions of the library service at all levels. The rulings are brief and very general in nature. They locate the library service organizationally, establish the mission, indicate the responsible library official, and give some indication of the operating procedures. To aid in implementation the library ordinarily publishes a manual or technical bulletin expanding the general regulations and describing the pattern of operation expected. Wherever possible, allowance is made for local determination concerning the best methods to be used. These regulations and manuals are specific and detailed only in those sections governed by agency- or government-wide regulations. Whenever possible, they encourage local initiative and responsibility. As an example, information concerning book circulation and charging

methods is very general, and the local librarian can determine the particular method that best meets the station's needs.

The central office of a library system reserves greatest authority for itself in the field of policy determination. The trend is to have policy control over as wide a range of activities as possible. Good management is evidenced thus, since it prevents overlapping, codifies existing regulations, consolidates similar services, and provides a clear definition concerning the activities that can be most economically centralized in one office and those that can be handled more effectively in the field. Central office organizations are small in operating staff and simplified in form. The pattern varies from a system with the central field control embodied in one professional librarian and no structural divisions, to one with fifteen professional librarians and three divisions under a director. During the past five years, the systems have moved toward small, compactly organized units.

Noticeable is the leadership shown by the libraries in using mechanical aids to replace or supplement traditional methods and to provide the most effective service at the least cost. The Department of Agriculture system, where Ralph R. Shaw has developed two unique machines embracing photographic processes, is outstanding.<sup>22</sup> The Rapid Selector and the Photo-Clerk represent explorations of mechanized solutions to library problems. Machines have also been adapted to book purchasing and cataloging in the Veterans Administration, so that clerical work there has been reduced to a minimum.<sup>23</sup>

Quality and quantity controls are generally used, with increasing interest shown in performance standards. It has been necessary for the systems to establish their own norms, since such library criteria as have been developed generally are suited mainly to college or public libraries. Although attempts have been made to fit such standards to government use, the adaptations are at best mere approximations of the original norms. Hence, government systems have individually made studies and worked out specialized standards.

Formulas, developed from field data, are used to prepare budget submissions. They generally deal with the numbers and types of patrons to be served, and also recognize the varieties and complexities of services performed. The financial request is sent by the library service through the responsible bureau to the agency budget officers. An agency budget is then prepared and submitted to the Bureau of the Budget, and later altered to conform to the Bureau's recommendations. Congress, after presentations by the Bureau of the Budget and

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the agency, authorizes an appropriation item for the agency, and the library system is notified as to funds available for the fiscal year. On the basis of these, a final budget is prepared. Allotments are made quarterly to field stations, based upon numbers and types of personnel served, upon the variety and extent of programs, and finally upon the special needs of stations. These allotments are usually paper transfers of funds.

Most difficult of all the problems in government library systems is the constant adjustment of operations to fit staff allowances. In most nongovernmental libraries, the number of library personnel available for a year or longer is established on the basis of demonstrated need and remains stable on an annual basis. Since federal library systems are generally small segments of larger bureaus or divisions, the size of the central office and field library staffs tends to be determined first by the number of people available to the agency, second by the number granted the bureau or division, and finally by the strength of the justification prepared by the library service. Many of the systems have tried to stabilize staffs through the development of standard staffing patterns and guides. Although the attempt has been to make these guides realistic, they have had little or no effect either upon the actual staff allowed or upon its stability.

Even after annual staff allotments have been made, budget and personnel cuts can be and are put into effect. The resulting uncertainty has forced the systems to plan programs upon the basis of minimum services, or of graded services, with adoption of priorities and understandings as to possible eliminations. The trend is to develop strong standards for library personnel, and to intensify recruiting; the latter in an effort both to maintain high quality and to fill vacancies as rapidly as possible, since the first result of cuts in personnel usually is to do away with unfilled positions.

In order to safeguard government property, detailed systems have been developed to provide records showing source, quantity, and location of materials. Such registers apply to things classified as "non-expendable." Since books have been placed in this category, the cost of recording accountability has approximated the actual cost of the books. Generally no differentiation is made between responsibility for books and that for any other item. It involves a complex system of record keeping in compliance with regulations. The accounts are subject to regular audit within the agency, and librarians necessarily divert some of their time from service to the maintenance of records.<sup>16, 24</sup>

Recognizing the loss of valuable professional effort, and also the fact that the resale value of books could never compensate for the accounting expense, there is a definite trend on the part of library administrators to convince agencies of the negative and uneconomical nature of such records. During World War II the Army Library Service<sup>25</sup> began an attempt to relax accountability regulations, but so far they have not been altered. The first agency to declare books expendable was the Veterans Administration, which recognized in 1946 that it was an economy and an impetus to professional activity to place books in such a category, and subsequently accepted the library shelf list as an authoritative accountability record. This is an important advance in government library procedures. Many other agencies are active in their efforts to achieve such a solution.

Procedures on acquisitions vary. Some units use agency-wide purchasing offices, others the Federal Supply Service, and a few have purchasing responsibilities within the library organization. The assumption of contracting and purchasing by library authorities provides the most efficient service. Where buying is handled by a nonlibrary office, constant surveillance is required to insure that contracts run concurrently and that they fully represent the needs.

The systems have progressively simplified cataloging techniques. Classifications have been standardized and reduced to meet specific needs. Excessive bibliographic detail has little place in most of the catalogs, since they primarily serve as locating devices and not as research paraphernalia. Although the trend has been toward providing field stations with complete sets of catalog cards for books purchased centrally, in most of the systems this service covers only a minor part of the total book accessions. The field libraries are still left with a major portion of the cataloging responsibility.

Federal libraries having technical or scientific branches are exploring the possibilities of contracting with nongovernmental libraries for specialized reference and bibliographic services. Limitations on and reductions of library staffs, plus the increasing cost of printed materials, have impelled them to examine such outside sources of aid.

A further recent development is the use by federal library systems of advisory groups composed of library specialists. Generally, such groups assist in evaluating the programs and provide objective critical analysis. They also serve effectively as liaison agents between the agency officials and the world of librarianship.

The trend of library development in the government systems indi-

### *National Systems*

cates that attempts will be made to provide even greater centralization. Also indicated are further studies with a view to consolidating some or all of the systems into a single unit. It is very probable that such investigations will end, as they have in the past, with the conclusion that such a centralization of services is unattainable because of the organic integration of the various libraries within their services. Even the desirability of such centralization is to be questioned, since it inevitably encourages uniformity. Up to the present, standards and standardization have served as service aids. They have set up scales for such matters as book and magazine needs, staff sizes, and classification systems, and have enabled the library directors to explain their needs to nonlibrarians. Properly, however, book selection, methods of service, and management have been left in the hands of the field librarians, thus conducing to staff development and superior service.

Is there, then, any coordination possible in these five library systems, spending a total of \$10,000,000 per year, with an aggregate of more than 6,000,000 volumes, and circulating more than 30,000,000 items per year? There are, in fact, many fields to explore. One embraces voluntary cooperative efforts, of which many instances have appeared in the past few years. In addition, purchasing and cataloging indicate points at which service and savings should be studied. Finally, the possibility of a federal library committee needs further consideration. This committee would differ from the present advisory groups in that it would be an official government unit, with a permanent chairman and a small staff. It would be similar to the Armed Forces Medical Policy Council, and would serve primarily as a coordinating body, with which the various systems could discuss their plans and arrange for cooperative undertakings. It would have advisory but not operating responsibilities. It should study areas of responsibility, opportunities for cooperation, policy, procedures, and performance. It would assist the systems in carrying on the programs of effective library service so evident among them today.

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## Status of Personnel

RALPH M. DUNBAR

"IN CHOOSING a place in which to practice his or her profession, a librarian should not overlook the advantages, and the opportunities for public service, offered by a position in a Government library." So reads a recruiting booklet issued by the U.S. Civil Service Commission.<sup>1</sup>

The purpose of this paper is to examine the advantages just mentioned, to trace in part how the present conditions have come about, and along the way to note any disadvantages which may crop up in the course of the probing. In other words, "How do the professional librarians and the subprofessional librarians fare under the U.S. government as an employer?"

The specialists in public administration and personnel have formulated some criteria for making such an appraisal. If the writings of the experts<sup>2-5</sup> during the last twenty years or so are examined, the following common-core principles emerge as indicating sound practice for employer-employee relationships in private enterprise or in government:

1. All positions and jobs should be correctly classified on the basis of degrees of responsibility and difficulty of duties involved.
2. Compensation for each position or job so classified should be equitable; equal work should earn equal pay.
3. Employees should have a clear idea of their duties and responsibilities and of the supervisory lines of control; they should be placed in the positions in which they can do their best work.
4. Employees should be protected against arbitrary dismissal, or demotion without proved cause.
5. Employees should enjoy opportunity for advancement.
6. Employees should have working conditions which are satisfactory as regards annual leave, sick leave, lighting, heating, ventilation, freedom from noise, and general physical comfort.

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7. Employees should have encouragement to safeguard their health and their future economic security.

Position classification in the government may well be examined first. Before librarians are considered specifically, some background facts will be helpful. The Classification Act of 1949,<sup>6</sup> which made significant changes in earlier acts, now governs the grading of federal positions. It sets up only two schedules or broad kinds of service, namely, the General Schedule and the Crafts, Protective, and Custodial Schedule. The General Schedule now includes all scientific, technical, professional, administrative, fiscal, and clerical positions. It provides for eighteen grades. No distinction is made between a professional grade and a clerical grade. A clerk, a stenographer, a chemist, an educationist, or a librarian may each have the grade GS-6, provided the responsibilities and duties of the position rate that grade. The top three grades in the General Schedule are restricted by an act of Congress, in that the number of positions in the entire federal service is limited to 300 in GS-16, 75 in GS-17, and 25 in GS-18; and the Civil Service Commission must give specific approval to each classification in that grade.

As previously indicated, positions involving librarianship are in the General Schedule. Library positions (formerly designated professional) are divided into eight grades, based on degrees of responsibility, difficulty of duties, and significance of work. These grades are GS-5, GS-7, GS-9, and GS-11 to GS-15. Library-assistant positions (formerly designated subprofessional) are classified into six grades, GS-2 to GS-7.

The description, responsibilities, duties, and qualifications required for each grade are set forth by the U.S. Civil Service Commission *Class Specifications*,<sup>7</sup> issued in May 1945. What is contained in these specifications may be best understood by examining an actual example, such as the one for the old P-2 library position (now GS-7):

*General statement:*

This class is made up of positions the duties of which are to direct a field or branch library having limited reference sources; or to do reference, cataloging, or classification work of moderate difficulty; and to perform other work incidentally as assigned.

*Distinguishing features of work:*

Library work at this level is made up of one or more of the following functions:

. . . . .



## *Status of Personnel*

### CATALOGING

At this level is found descriptive cataloging of library material which is difficult (in that it requires extensive and sometimes unusual descriptive entries) and for a large proportion of which research is done to establish entries. Such material includes serial publications, the authors or issuing agencies of which are not consistent, scientific literature for which the actual date of publication must be known or for which extensive author entries must be made, or foreign publications having incomplete title page information. The work of catalogers in positions in this class is revised for consistency of form and entry, and advice and consultation with a supervisor is available. In performing the work, catalogers follow established rules but have opportunity to suggest adaptations.

Also found in positions in this class is the duty of serving as head of a cataloging unit, assigning, directing, and revising the work of a small number of catalogers of lower grade. The incumbent of such a position gives advice on cataloging problems, personally catalogs unusual or otherwise difficult material, such as that requiring extensive descriptive entries or research to establish entries, and adapts individual rules to accommodate growing collections. No review is made of the technical phases of the work performed or supervised. The employee consults with a head librarian or other supervisor on over-all or policy matters.

• • • •

#### *Qualifications statement:*

##### *(a) Knowledges, abilities, and other qualities:*

Thorough knowledge of professional methods; thorough knowledge of the use of library tools in selective reference work; ability to contact people tactfully; ability to make library material available for use of specialists in a limited field of knowledge.

##### *(b) Experience, training, and education:*

Technical library experience which included such duties as the cataloging and classification of books, documents, and periodicals, answering difficult reference questions, and compiling bibliographies. Academic training in library science may be substituted for part of the required experience.

##### *(c) Physical standards:*

Incumbents must be physically capable of performing the duties of the position and be free from such defects or diseases as would constitute employment hazards to themselves or endanger their fellow

employees or others. Incumbents may have physical handicaps which will not prevent their satisfactory performance of the duties.<sup>7</sup>

This grade, GS-7, represents a higher degree of responsibility and more difficult duties than those required for GS-5. The specifications for grades GS-9 and GS-11 to GS-15 show progressively higher requirements than those defined for the GS-7 example. At the old P-6 (now GS-13) level, for example, the general statement reads: "This class is made up of positions the duties of which are to direct a special library having a broad general collection and research collections in some of the specialty fields, and providing selective reference and bibliographical service; or to direct reference services in a library having extensive research collections; and to perform other work incidentally as assigned."<sup>7</sup>

The library-assistant positions beginning with GS-2 likewise specify progressively higher requirements as they rise to GS-7. In general, the work in the lower grades is differentiated from professional work in that the duties involve performance or supervision of routines and techniques peculiar to libraries. They do not require a knowledge of the philosophy or the objectives of library science, but they are differentiated from clerical positions, which are reserved for operations occurring in any office.

The principle of equal pay for equal work prevails, therefore, in the federal service. But what is the rate of pay? The latest authorization by the Congress attaches the price tags in Table 1 to the various grades in the General Schedule, effective June 30, 1951.

For the table to be fully meaningful, a copy of the *Class Specifications* should be at hand to indicate the duties, responsibilities, and requirements of each of the grades (corresponding grades under the old schedule are shown in Table 2 of this article). Since space is not available for that purpose, several examples may be helpful. For instance, a grade GS-7 librarian, a professional worker with one year's experience in professional work, starts at \$4,205, receives an annual increase of \$125 provided his performance ratings are satisfactory or better, and reaches a maximum of \$4,955 at the end of six years. If he continues acceptable service after reaching the maximum salary, three successive step increases are allowed for every three years of additional service. This longevity provision applies only to the first ten grades. To take another example, the GS-13 head of a specialized federal library having an extensive collection of orig-

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TABLE 1  
*Salary Scale—General Schedule \**

Grade†	Basic Salary	Periodic Increase	Step intervals in weeks	Maximum Basic Salary
GS-1	\$ 2,500	\$ 80	52	\$ 2,980
GS-2	2,750	80	52	3,230
GS-3	2,950	80	52	3,430
GS-4	3,175	80	52	3,655
GS-5	3,410	125	52	4,160
GS-6	3,795	125	52	4,545
GS-7	4,205	125	52	4,955
GS-8	4,620	125	52	5,370
GS-9	5,060	125	52	5,810
GS-10	5,500	125	52	6,250
GS-11	5,940	200	78	6,940
GS-12	7,040	200	78	8,040
GS-13	8,360	200	78	9,360
GS-14	9,600	200	78	10,600
GS-15	10,800	250	78	11,800

\* Source: *United States Statutes at Large*. Vol. 65. Washington, D.C., U.S. Government Printing Office, 1952, p. 612.

† No library positions normally exist in grades GS-8 and GS-10. Library assistants (subprofessionals) are in grades GS-2 to GS-7, thus overlapping the librarian positions which begin at GS-5. Clerical and stenographic positions are normally in grades 3 to 6.

inal sources plus a general collection, or the head of a reference department with highly developed reference collections, starts at \$8,360, receives an increase of \$200 every 78 weeks, and reaches a maximum of \$9,360 at the end of 7½ years.

How do federal library salaries compare with nonfederal ones? Without considerable statistical calculations and reduction to comparable terms (if that is possible), it is dangerous to try comparisons. But a few bare figures can be pointed out for what they are worth. For instance, a recent A.L.A. survey\* made on a sampling basis showed that on March 1, 1952, the median annual salary being paid junior librarians was \$3,317 in public libraries, \$3,147 in college and university libraries, and \$3,282 when all types of libraries are included. The same survey indicated that the annual median salary being paid chief librarians was \$4,106 in public libraries, \$5,700 in college and university libraries, and \$4,678 when all types of libraries

are considered. The college and university compilation as of September 1, 1952, issued by the Association of College and Reference Libraries,<sup>9</sup> shows a median annual salary of \$8,250 for the chief librarians of large university and college libraries and a median of \$5,936 for the medium-sized college libraries. The median of the medians for department heads in the large universities and colleges is given as \$4,400, and for the department heads in the medium-sized institutions as \$3,800. The corresponding figures for "all other professional assistants" is \$3,468 for the large university and \$3,300 for the medium-sized college libraries. The Bureau of Labor Statistics survey<sup>10</sup> in 1949 found that the average annual salary of professional librarians was \$3,050, all types of libraries included. Chief librarians were receiving on the average \$3,200, chief assistant librarians \$3,050, and chiefs of departments or divisions \$3,225. Although exact bases for comparison are not available, it evidently is not an overstatement to say that federal library salaries compare favorably with those paid in non-government libraries.

The present status of librarians in federal position classification and pay plans was not attained without a long, hard struggle. The trend may be seen by tracing the history of legislative measures on the subject, and remembering always that the efforts which affected librarians were part of a much larger program covering federal employees in a wide range of occupations.

The first landmark is, of course, the original Civil Service Act of 1883.<sup>11</sup> This law contained the provision "that all the offices, places, and employments so arranged or to be arranged by classes shall be filled by selections according to grade from among those graded highest as the results of competitive examinations."

As years went on, it became apparent that equal work was not being rewarded with equal pay, and moves were started to correct the injustices which had arisen in the classified service. Proposals were made to the Congress in behalf of many types of government employees, including librarians.

In 1921, librarians in the District of Columbia reported their difficulties in getting the Joint Congressional Commission on Reclassification to put librarians on a par with scientific, technical, and professional workers. Then when that problem was solved in part, there came the difficulty of getting the salaries of librarians made comparable with those of their co-workers. The previous low compensation of librarians caused the Joint Congressional Commission to place

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librarians below all other professional workers. A Library Advisory Committee finally succeeded in establishing its claim that library salaries should be comparable to those of other professional workers on the basis of duties, responsibilities, and qualifications. That principle was included in the Lehlbach Bill, which failed of passage in the 66th Congress, possibly because it was too voluminous and detailed.<sup>12</sup>

In the 67th Congress, which began on April 21, 1921, two competing measures were introduced, viz., the Sterling Bill (S.11), based on the Lehlbach Bill but much simpler, and the Wood-Smoot Bill (H.R. 2921 and S. 1079), known also as the Bureau of Efficiency Bill. There was much legislative maneuvering, and it was not until the closing days of the 67th Congress that a compromise measure was passed, known as the Classification Act of 1923.<sup>13</sup> The law created a Personnel Classification Board, to be composed of three members—one from the Bureau of Efficiency, one from the Bureau of the Budget, and one from the Civil Service Commission. It also provided for five "services," as follows: (1) Professional and Scientific; (2) Subprofessional; (3) Clerical, Administrative, Fiscal; (4) Custodial; and (5) Clerical-Mechanical. In the Professional and Scientific Service seven grades were established, although only six were provided for librarians; and in the Subprofessional Service eight grades, although only seven were allotted for librarians. The salary provisions of the Act were not to go into effect until July 1, 1924, over a year later. The House, which had passed one form of the bill thirteen months earlier, insisted on this condition so that the delay would allow time for sound allocation of the 65,000 or more government positions in Washington.

The passage of the Classification Act of 1923, however, did not solve the problems of federal librarians. Far from it. The definitions of the "services" were so ambiguous that librarians, with very few exceptions, were placed in the Clerical Service. It soon became evident that librarians were being graded on the basis of the low salaries hitherto received and not on the nature of the work performed and the qualifications required. A group of librarians in the District of Columbia immediately undertook to marshal facts on the professional nature of librarianship, for presentation to the Personnel Classification Board. Its arguments were assembled in a comprehensive printed report<sup>14</sup> of ninety-four pages, justifying the claim that librarianship is a profession, presenting job analyses of library positions in seven pro-

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fessional and five subprofessional grades, and suggesting a scheme for rating federal libraries not only by size but also by service rendered.

The persistence and sound arguments of this library group helped to bring about a reversal of view on the part of the Personnel Classification Board. During the period January to June 1924, the chairman of the librarians and a trained investigator assigned by the Board examined almost every library position in Washington, with emphasis on duties performed and not on the salary previously received. The facts were presented first to the General Services Committee, made up of three eminent scientists, which the Board had set up to consider the arguments of groups claiming professional status, and then to the Personnel Classification Board itself. It was on the basis of such data that the Board altered its opinion on the nature of librarianship. The final results led the chairman of the library group to state jubilantly: "This oft-repeated slogan [librarianship is a profession, and librarians are professional] is now true in the U.S. Government service, not only for the higher grade executives, but for the rank and file as well."<sup>15</sup>

For comparison with the 1949 classification and pay scale described earlier, it may be interesting to note several examples of the 1923 standards promulgated by the Personnel Classification Board for library positions, as follows (Due to lack of space in this article full specifications are given only for Grade P-1; in the case of P-6 they appear in part, but for the other grades they are restricted to title and salary.):

Grade P-1. Junior Librarian \$1,860-\$2,400

*Duties and typical tasks:* To perform under immediate supervision, minor duties in the field of library science. [Then follow descriptions of those duties in the various types of library operations.]

*Minimum qualifications:* Training equivalent to that represented by graduation with a degree from an institution of recognized standing; graduation from an accredited library school; a reading knowledge of not less than two modern languages.

Grade P-2. Assistant Librarian \$2,400-\$3,000

Grade P-3. Associate Librarian \$3,000-\$3,600

Grade P-4. Librarian \$3,800-\$5,000

Grade P-5. Senior Librarian \$5,200-\$6,000

Grade P-6. Chief Librarian \$6,000-\$7,500

*Duties and typical tasks:* To act as the scientific and administrative head of the Library of Congress.

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*Minimum qualifications:* [In addition to education and training requirements, must possess "extended experience in most responsible library work; outstanding professional attainments; and executive ability.]<sup>16</sup>

The Classification Act of 1923, although covering many types of federal positions besides those in libraries, was indeed an important landmark in the movement to have librarianship recognized as a profession and to pay its workers on the basis of responsibilities and duties. The next major event was the Classification Act of 1949, already described, but there were a number of developments in between. In 1928 the Welch Act<sup>17</sup> amended the 1923 law by increasing the salary rates in the compensation schedules, and by changing the number of grades in the Professional and Scientific Service from 7 to 9.<sup>18</sup> It also provided that this Service should include "all classes of positions the duties of which are to perform routine, advisory, administrative, or research work which is based upon the established principles of a profession or a science, and which requires . . . technical training equivalent to that represented by graduation from a college or university of recognized standing." Prior to the 1949 Act, the pay rates for federal employees under the 1923 measure and the amending Welch Act of 1928 were adjusted three times, that is, by the Federal Employees Act of 1945, by the Federal Employees Pay Act of 1946, and by the Federal Employees Pay Act of 1948.<sup>19</sup>

The Library of Congress has been involved in these problems of classification and pay plans, even though its positions are not filled through open, competitive examinations held by the Civil Service Commission. The positions in the Library of Congress are subject to the Classification Act of 1949, and the pay rates follow the current schedule for other federal employees.

A bit of history here may not be amiss. In accordance with the provisions of the Classification Act of 1923 Herbert Putnam, then Librarian of Congress, after involving his administrative heads in the problem, submitted to the Personnel Classification Board a statement on the personnel requirements at the Library of Congress, which has been described as "eloquent, considered, and well-ordered."<sup>20</sup> After a year's experience with the position-classification plans, he stated that although the application of so comprehensive a scheme could not be free from inconsistencies, discrepancies, and individual hardship, the net result was a decided gain. And in 1940, a later Librarian of Congress<sup>21</sup>

requested the U.S. Civil Service Commission to conduct a survey of the Library in order to adjust existing inequalities of classification, to take account of changes in the duties of positions, and to bring the classification of positions into line with that of the government service generally. In 1944 the Librarian reported that the reclassification of positions had been completed, and had resulted in more equitable pay for many of the workers, improved organization, and determination of specific responsibilities for employees.<sup>22</sup>

With position-classification and pay plans for federal librarians examined, the next point to consider is the matter of "job descriptions" and "job sheets." This administrative device confronts every federal librarian when he enters the service, and while he is in it, and in fact before he accepts a position, although he may not be aware of that. The job sheet serves several purposes. The duties and responsibilities enumerated on it serve as a basis for determining the grade of the position according to the standards set forth in the *Class Specifications* described earlier.<sup>7</sup> Within limits the job sheet furnishes, or should furnish, the federal librarian with a blueprint of the requirements of his position.

The job sheet grows out of the description of the position drawn up by the incumbent or supervisor. According to the Civil Service Guide on the subject, an adequate position description should cover these points: (1) nature and purpose of work, including a brief list of duties; (2) scope and effect of the work in this position, how it affects the agency, other agencies, and the public; (3) amount of supervision and guidance received in the position from immediate supervisors and others; (4) mental demands of the position in terms of initiative, originality, and judgment; (5) nature and purpose of contacts with persons and agencies other than own supervisors and subordinates; (6) other knowledges, skills, or considerations not otherwise described.

From the job description, a job sheet is written for the position. The length of these job sheets varies among the federal agencies and with the type of position. Some run to two pages in length; others contain only a paragraph. The following are examples of the short form used by one efficient federal library in describing GS-5, GS-7, and GS-9 positions in its Division of Technical Processes:

*Librarian (Trainee), GS-1410-5, Catalog and Records Section*

Under immediate supervision of a librarian of higher grade and



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subject to technical review, performs professional library work requiring a thorough knowledge of library techniques and of the rules of library science; searches unrequested gifts and blanket purchase orders; files into the Library catalog and subject authority file; catalogs, classifies, and assigns subject headings to technical, scientific and related material (much of it in foreign languages), in accordance with Library of Congress and Department of Agriculture rules and interpretations; assigns Cutter numbers to all types of foreign and domestic publications; and performs related duties as assigned.

#### *Librarian, GS-1410-7, Catalog and Records Section*

Under the general supervision of a librarian of higher grade, performs professional library work requiring a thorough knowledge of library techniques and of the rules of library science, and considerable experience of professional nature in the library field as well as the ability to direct the work of lower grade assistants when required; searches unrequested gifts and blanket purchase orders; catalogs technical, scientific and related material (much of it in foreign languages), requiring discrimination and the application of advanced library techniques and the ability to analyze material in a special field so as to show its relation to cognate fields; describes publications in full bibliographical detail so as to identify them and to differentiate them from all other publications in the collection; analyzes the contents of publications, assigns the subject headings, classification and Cutter numbers in order that the material may be readily located by specialists working in the subject field; files without revision into the Library catalog and subject authority file; and performs related duties as assigned.

#### *Librarian (Reviser), GS-1410-9, Catalog and Records Section*

Under the general supervision of the Chief and Assistant Chief, Catalog & Records Section, shares with one other Librarian the responsibility for the descriptive cataloging, classification and assignment of Cutter numbers to all material to be added to the Library; is responsible for the assignment of subject headings to bring out the contents of all materials of interest to the Department; recommends criteria to be used in applying and establishing rules and exceptions for cataloging and classifying cognate material on a wide range of subject matter; serves as reviser for at least two professional librarians working on cataloging, classifying, and searching activities; and performs related duties as required.

Granted that a position has been reasonably well described, how does the federal government recruit, examine, and select its librarians?

The recruiting takes place in several ways. Notices of library examinations are sent by the Civil Service Commission to library schools, library associations, libraries, periodicals, and federal buildings. Detailed information is made available in the form of a printed leaflet which describes the duties of a position, the location, and salary. This leaflet specifies the education and experience requirements, whether or not the examination includes a written test, what application forms to submit, and where and when to file them. Recruiting for specific vacancies is done also by the agencies themselves, which write to desirable prospects informing them of openings and suggesting that they file a Form 57 (application) with the U.S. Civil Service Commission. There is also interagency recruiting, in which posts in higher grades are brought to the attention of librarians of lower grades in other agencies.

The civil service examinations<sup>23</sup> for the GS-5 (formerly P-1) positions include a written test covering general abilities, paragraph reading, vocabulary, English usage, graph and table interpretation, arithmetical reasoning, and abstract reasoning. The educational requirements which must be met are *one* of the following: (1) a full four-year course, in an accredited college or university, including or supplemented by thirty semester hours of study in library science; (2) one full year of professional library training in an accredited library school and either (a) the successful completion of three years of education in an accredited college or university or (b) three years of successful and progressive experience in library work, which has provided an understanding and application of methods and techniques used in professional library work, the equivalent of the completion of a course in library science; (3) four years of successful library experience of the type described in 2 (b) just preceding.

The Civil Service Commission rates the papers according to standardized procedures, assisted when necessary by practicing federal librarians. Library applicants are considered under four options: Acquisition, Administration, Cataloging and Classification, and Reference and Bibliography. In the case of applicants for grades GS-13 to GS-15 a Board of Expert Examiners, composed of federal librarians, meets upon call to rate applications, first as to eligibility under the standards and then as to fitness for a specific vacancy.

The rating table customarily followed by the library advisory committee provides: 90 points for outstanding experience for the position for which the applicant is being considered; 80 points if the applicant

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is less than outstanding but better than good; 70 points (the minimum passing grade), if the applicant has good experience for the job. Additional points are given for special qualifications, not specifically required but particularly useful in the position. Five points are added if the applicant is a veteran; and ten points, under certain conditions, if he is a disabled veteran. The points for quality of experience, plus any additional ones allowed, plus any veterans' preference points, make up the final rating. All persons with a rating of 70 or above are placed on the civil service register of eligibles, coded to show whether they are fitted especially for administration, reference and bibliography, cataloging, or some other type of library work.

Appointments to federal library positions, with certain exceptions, are made from these registers of applicants who have passed the examination for a particular grade. When there is a vacancy in a library position, the agency requests the Civil Service Commission to certify a list of persons eligible for appointment. Usually five names are certified, taken from the top of the register and arranged in priority order of their ratings, with a special note of any veteran.

The appointing officer is required to make his first selection from the top three, and if a veteran is passed over, that action must be justified to, and sustained by, the Civil Service Commission. If one of the top three eligibles states that he is not interested, then the fourth name becomes available for consideration when necessary. If still another from this trio replies, "not interested," then the fifth name may be moved up for consideration.

The exceptions referred to in the appointment system include the staff of the Library of Congress, the librarians in the foreign service of the State Department, those under the Special Services Division of the Department of the Army in installations at home and abroad, the librarians under the Department of the Air Force and the Atomic Energy Commission, and some others. These agencies have their own systems.

The matter of appointment in the Library of Congress has an interesting background. In 1897, just before the removal of the Library from the Capitol to the new, magnificent building across the street, the Joint Committee on the Library called before it representatives of the American Library Association and other librarians to testify regarding policies, functions, operational methods, classification schemes for the books, and appointment authority.<sup>24, 25</sup> The library witnesses included Melvil Dewey; Herbert Putnam, then of the Boston Public

Library; William H. Brett, of the Cleveland Public Library and president of the American Library Association; G. H. Baker of the Columbia University Library; and Ainsworth Spofford of the Library of Congress.

The question of the best method of selecting the staff of the Library of Congress was posed again and again by the quizzing congressmen. Should the Joint Committee make the appointments? Should the Joint Committee make them upon the recommendation of the Librarian? Should the Librarian be vested with the sole power of choice? Should a panel of outside librarians aid the Librarian of Congress in picking the staff? Should the Librarian make his selections from a list furnished by an outside agency such as the Civil Service Commission? As the hearings indicate, the replying librarians were sometimes on the horns of a dilemma, but the consensus appeared to be that the Librarian of Congress should have the power of appointment, provided he were free from undue political interference; otherwise, it might be better to make the selections from a civil service list. Before the report with recommendations was available, legislation was passed for the operation of the enlarged institution, vesting the power of selection solely in the hands of the Librarian of Congress.<sup>26</sup>

The first statement of the Librarian of Congress<sup>27</sup> regarding appointment described the application form, which tabulated the education and experience of the applicants, noted that no written examinations were being held, and explained that the experience and work on the Library of Congress staff with pay during the probation period of three to six months constituted the examination.

At this point, it might be well to introduce some current personnel figures showing the number of librarians and library assistants in federal employ, broken down by grades. It should be noted that Table 2 does not include all persons employed in federal libraries, but only those classified in Library Series 1410 (formerly professional) and Library Series 1411 (formerly subprofessional). Subject specialists, legal specialists, science analysts, document control officers, technical abstractors, technical information specialists, and information officers are not counted unless appointed from the Library Series, even though they are on the library payrolls.

At the outset of this article, mention was made of good tenure practices as an element of satisfactory employer-employee relationship. How is it in the federal government? Under the regulations, a librarian can be removed (i.e., discharged) because of misconduct, insubordination, disloyalty, crime, gross incompetence as shown by

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TABLE 2  
Number of Librarians and Library Assistants in Federal Employ

Grade	Former Grade	Library Positions (1410 Series)				Library Assistant Positions (1411 Series)			
		Executive Agencies • D.C. Outside Area	Library of Congress †	Army Library Program †	Total	Executive Agencies • D.C. Outside Area	Library of Congress †	Army Library Program †	Total
GS-1	SP-1, SP-2					3	6	11	20
GS-2	SP-3					58	58	105	221
GS-3	SP-4					112	171	55	384
GS-4	SP-5		2		2	120	208	174	581
GS-5	P-1, SP-6	129	323	170	125	41	49	75	165
GS-6	SP-7	6	20	1	80	5	5	11	21
GS-7	P-2	257	438	261	92	2			6
GS-8	—	3	7	1	41				
GS-9	P-3	173	164	238	26				
GS-10	—	3	6	2	5				
GS-11	P-4	79	37	102	14				
GS-12	P-5	31	11	54	—				
GS-13	P-6	15	1	28	1				
GS-14	P-7	6	0	18					
GS-15	P-8	2	0	8					
Total		704	1007	885	384	341	500	432	1398

\* Count as of July 1, 1951, by the U.S. Civil Service Commission.

† Count as of Feb. 2, 1953, by Personnel Division, Library of Congress.

‡ Count as of Feb. 5, 1953, in letter from Maj. Gen. W. E. Bergin, Adj. Gen., U.S. Dept. of the Army, dated Feb. 9, 1953.

§ Includes 8 TVA library positions, not distributed.

|| Includes 3 TVA library-assistant positions, not distributed.

an "unsatisfactory" performance rating, or other serious reasons. The procedure requires that the accused employee be given a written statement specifying the causes. He must be afforded a chance to reply. The head of the organization, after full consideration of the case, takes final action. If the employee still feels that the action is unjust, he has the right of appeal according to an established procedure.

Another circumstance which may affect the federal librarian is a "reduction in force" caused by lack of funds or lack of work. In such cases the order of retention depends upon such factors as veteran preference, type of appointment (whether permanent or indefinite), length of government service, and performance ratings. Every effort is made to assist a removed employee in finding another position in his own or in another agency.

What are the chances for advancement in a federal library? It is the definite policy of many agencies to fill vacancies by promoting librarians from a lower grade, provided they have acquired the necessary experience and have demonstrated ability to perform more difficult duties and to assume greater responsibilities. Naturally, the higher one goes in the scale the fewer are the opportunities for obtaining new positions, but openings do occur.

Although not really promotions, there also are in-grade raises in pay at specified intervals (step increases), provided the librarian's performance rating is "Satisfactory" or better. A salary rise equal to one periodic step increase may be given for work rated as "Outstanding," such as an accomplishment which has brought about the initiation of a new method or device, or a special service in the public interest.

Some explanation may be needed regarding the performance rating<sup>28</sup> which has recently superseded the former efficiency report, with its thirty-one basic elements for appraising, only a part of which are used for any one position. The performance rating scheme, instead of providing for the five possible marks (Excellent, Very good, Good, Fair, Unsatisfactory) of the former scheme, has only three: Outstanding, Satisfactory, or Unsatisfactory; and there is no evaluating of individual elements. The rating "Outstanding," referred to in the previous paragraph, must always be supported by a justifying statement. "Satisfactory" is given if the incumbent's performance of work, for the period of time specified, has met or exceeded the requirements for the position. "Unsatisfactory" is recorded in case the performance fails to meet the demands of the position.

In the last instance an official warning must be given, after which

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ninety days are allowed the employee to bring up the rating to "Satisfactory"; and if this is not accomplished, demotion or dismissal follows, according to the regulations. In all cases where ratings are involved, the supervisor and the supervised are enjoined to hold periodic interviews on the subject, so that the employee is informed of his standing. It might be added here that there is a regularly established grievance procedure for government employees.

It is the expressed policy of the federal government to encourage in-service training. The *Federal Personnel Manual* specifies: "The purposes of Employee Development are to develop a well trained work force and to assist employees toward self-improvement efforts, taking into account the staffing needs of the agency and the availability of facilities for such assistance."<sup>29</sup> Pressure of work in the federal libraries and lack of funds have prevented the full attainment of these goals, but informal training is carried on where there are not formal classes.

From time to time the Graduate School of the Department of Agriculture offers courses at the professional and subprofessional levels which are useful to librarians. There is also an accredited library school in the District of Columbia at the Catholic University of America. The Library of Congress has given considerable attention to in-service training. According to a recent report the library of the Civil Service Commission carries on systematic instruction for its library employees.<sup>30</sup> In addition, federal librarians have opportunity to participate in the activities of the District of Columbia Library Association and the Washington Chapter of the Special Libraries Association, not to mention those of the numerous educational and cultural organizations in the District of Columbia.

Let us consider now some of the "fringe benefits" that go along with federal employment. In the matter of vacations federal librarians of all grades, along with other government workers, are allowed annual leave on the basis of length of service, as the result of a recent law.<sup>31</sup> For the first three years the employee gets 13 working days per year; after the third year and up to 15 years, the allowance is 20 working days per year; and after 15 years of service it is 26 working days per year. In all cases the leave is credited to the employee as he earns it during each two-week pay period.

Legal holidays for federal librarians are eight normally, with occasionally an extra non-work day or so declared by the President. Four hours of sick leave are earned each two-week pay period. The current work-week is 40 hours (8 hours per day, Monday through Friday).

During World War II it was 48 hours (8 hours a day, Monday through Saturday), with no holidays except Christmas and the Fourth of July.

Working quarters for federal librarians vary greatly. Of the 100 or more federal libraries, a small number occupy quarters designed in advance for library purposes, with attention paid to adequate lighting, ventilation, quiet, and general comfort. In many cases the libraries have been located in wings or bays of buildings, in space originally intended for other purposes but by ingenious adaptations turned into reasonably good library quarters. Many of the smaller libraries have been housed wherever room could be found for them, so that conditions are close to being below-standard. Realizing the importance of a good physical plant as an aid to good performance, the Library of Congress sponsored in 1950 a conference on the relation of environment to work, participated in by nationally recognized experts in the fields of sound control, illumination, ventilation, color engineering, and safety. This conference has had effects on other libraries.

What does the federal government do in the way of encouraging librarians and other employees to take care of their health and future economic welfare? As concerns the first, most of the agencies have health rooms, with nurses on duty to assist in cases of illness or accidents on the job, to consult about health problems, and to give information about medical facilities. If a librarian is hurt in the course of his official duties, the Bureau of Employees' Compensation in the Bureau of Labor provides medical and hospital treatment. Personnel officers regularly call to the attention of employees the benefits of joining plans for group hospitalization and medical service, and appoint staff members to receive the necessary payments. Many federal agencies have employees' recreation associations, which promote participation in athletic sports, hobbies, entertainment, and discount plans at stores.

On the financial side, after specified years of service and at specified ages, retirement income is assured by the 6 per cent taken from each pay check plus a contribution by the government towards the Civil Service Retirement and Disability Fund. The ramifications of the arrangements<sup>32</sup> are too many to discuss here, but this simplified example may help: A GS-9 librarian, retiring at age 62 after 20 years of federal service and with an average of the five highest annual salaries calculated at \$5,120, would receive an annual retirement



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income of \$1,540 for life. Furthermore, to encourage savings and to tide over financial emergencies, credit unions are available to employees in most agencies.

From the evidence presented, librarianship under the federal government appears to enjoy favorable status in employer-employee relationships. Yet it is not all on the plus side. Library administrators and others have found defects in the *Class Specifications* of 1945. This matter was studied in 1952 by a subcommittee of the Washington Chapter of the Special Libraries Association, and suggestions were made to the Civil Service Commission. There have been complaints that the standards are not suited to the special cases which exist under the government, and that in some instances they are not applied uniformly and equitably. It has been alleged also that sometimes a job description has been written by an agency so closely around the qualifications of a desired candidate that others were more or less excluded. It has been said too that when some agencies find desired applicants unqualified for high library positions under the standards of the Library Series, they try to get them in under other titles.

A former government official, discussing the government personnel system, recently wrote: ". . . it is my basic thesis that the growing inflexibility of the civil service system of the federal government has not only served as a major impediment to the recruitment and retention of the best personnel for public service, but that these rigidities, so hopefully designed to eliminate political considerations, have failed in even this negative objective."<sup>33</sup> He proceeded to present a bill of particulars to back up his thesis, and then offered constructive suggestions for needed improvements.

Whatever the minus quantities may be, when the conditions of government service are checked against the seven major criteria for employer-employee relationship enumerated at the outset, the net result is surely a solid plus. The principle of equal work for equal pay prevails, the rate of compensation is favorable when compared with that of outside agencies, the tenure conditions are satisfactory, advancement is possible, working conditions are generally good, health is safeguarded, and a retirement system is in effect. It would appear therefore that the civil service recruiting circular was justified in its claims of advantages for federal library service.

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## Bibliographical Activity

JOSEPH W. ROGERS

BIBLIOGRAPHY has been most simply defined as a list of works arranged in some systematic manner. While most bibliographies fit comfortably enough within such a description, almost none are this and nothing more. It is not until one attempts to determine the functions they serve that he realizes the complexities of form in which they may be issued. Essentially, it is the function of a bibliography to provide the research worker with a list of existing works from which he may select certain ones for examination. When it has been compiled by another scholar working in the same or a related field it is a primary device by which research people share with one another the results of their labors.

Any compilation of bibliographic entries must so describe its items that each may be identified without question; it also must regard the ways readers approach the works listed. Too, it may, through the addition of related information, promote other ends. There may be added such data as the size of the piece; the presence of illustrations, maps, and other pictorial matter and peculiarities of physical form; the relationship to other works; the location of copies; the sales price if secured from the publisher; and the situation of the publisher. When annotated, bibliographies may effectively permit the researcher to discard items in which he would have no interest.

The bibliographies issued by federal agency libraries actually do serve more than one purpose. In some cases they are simple lists of new works in certain fields added to the library. In some they are selected materials present in the holdings. In other instances they may be materials known to exist, yet not known to be available in any particular library. On the whole, the bibliographies with which we are principally concerned here are those which identify and locate specific works accessible for consultation in federal or other libraries,

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or available for purchase through commercial sources or from the government; and those which more or less comprehensively cover large areas of subject matter, listing items issued within a stated period of time, in a specified part of the world, or in a particular physical form.

World War II clearly pointed up the fact that the country was deficient in desperately needed data about peoples and parts of the world with which there were new and urgent relationships. It also made clear that the sources of information about the publications of these countries were inadequate. The military necessity for facts regarding topography, languages, peoples, climates, and other physical characteristics of lands across the sea was so pressing that extraordinary steps were called for to bring together the needed data. The result was the accumulation in many government agencies of a completely new body of literature, which required constant supplementation to keep it current and up to date. Government libraries joined in very special efforts to repair gaps in their collections and to secure, from parts of the world theretofore neglected, the materials essential to assist the agencies directly involved in prosecuting the war.

With the end of hostilities the urgency for collecting materials from all parts of the world still existed, but for a new set of reasons. The re-establishment of normal conditions of living became the first order of the day in Europe, while war returned to Asia. A new scientific age had arrived, characterized by greatly expanded facilities for research and by a resultant multiplication of important scientific discoveries.

The United Nations began its turbulent existence in temporary quarters, started the publication of a complicated and massive set of documents, and settled gradually into the routines of a functioning organization. Concurrently, the United Nations Educational, Scientific, and Cultural Organization began functioning in its substantial and diverse program. International meetings of experts in the fields of science, motion pictures, bibliography, copyright, and the arts discovered ways of working together towards mutually desirable ends, though these were colored and complicated in every conceivable way by national interests. The specter of atomic warfare remained to give impetus and urgency to all movements in the direction of international good will and peace.

Never before has there been so great necessity for the easy avail-

ability and rapid communication of new discoveries, new facts, and prevailing ideas within and between the nations of the world. Never before have bibliographers had to deal with a mass of such proportions. It has become increasingly evident that libraries cannot exclude from their purview many of the nonbook materials now beginning to hold important segments of the total body of knowledge available. In the struggle for world leadership it has become of the utmost importance for the nation to have efficient means for the acquisition, evaluation, mastery, and dissemination of information. The need for bibliographic control of subject data of all kinds has called for completeness, specificity and comprehensiveness, and rapidity of distribution.

For the analysis required in this survey it has seemed desirable to isolate, as far as might reasonably be done, those movements which point towards the shape of bibliographic achievements to come. Certain bibliographies produced by government libraries will be cited as examples, but no attempt is made to evaluate individual projects or to describe their characteristics. Mention of a particular bibliography will appear when it illustrates, through one of its complex of features, the trend under consideration.

It is undoubtedly true that the roots of many current movements in the work of federal libraries lie in the changing role of government in the social and economic life of the country. As has been indicated, the federal libraries have been faced with a growing need for prompt, efficient service, often in fields which extend beyond the normal limits of their own activity. There has resulted a tendency towards ever-closer coordination of library activities within agencies, and more effective cooperation among the libraries of various agencies.

This has been true not only with respect to interlibrary loan, but has been perhaps the most significant single factor in the production of bibliographies. The Library of Congress occupies a dominant position in this development, not merely because of the size of its collections or because it "pours out an endless stream of bibliographies"<sup>1</sup> and other materials, but also because it is aware of the necessity for cooperative action. In introducing a valuable report on its recent bibliographic work the *Annual Report* for 1952 reviews the situation:

For almost a century librarians have sought ways to take advantage of each other's work and collections. They have had successful experience with cooperative indexing projects, cooperative cataloging, inter-

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library loans, union lists, and union catalogs. . . . At no time, however, has there been such a multiplicity and variety of cooperative projects undertaken by libraries as during the period since World War II.

Of late this cooperative effort has been more and more imperative. The resources of even the largest libraries have been strained almost to the breaking point by attempts to acquire ever-increasing masses of research material and to meet the needs of those who use such material with no corresponding increase in staff or funds. Cooperation—pooling resources—was the only answer. Thus there have been [among many others] projects to acquire books and other library materials more effectively and more efficiently; . . . to describe library resources and list holdings; to catalog books and special materials, such as motion pictures and phonograph records; . . . to prepare bibliographies, indexes, and abstracts; and to develop cataloging rules that will make cooperative cataloging possible and catalog cards interchangeable.<sup>2</sup>

Certainly one of the most interesting developments of this nature has been the arrangement under which a government agency having need for a specific bibliographic service, but neither the physical plant nor trained personnel to produce it, contracts with another agency equipped to provide the service, through transfer of funds. As this relationship has evolved, it has expanded to include not only federal libraries, but also libraries—and other research installations such as laboratories—in universities and within industries. Such cooperative activity is a direct outcome of needs which arose in World War II and which have continued to spring from defense requirements.

There are many other instances in which interlibrary cooperation has been productive in the field of bibliography. No better example could be found, perhaps, than the practice among research libraries of supplying cards for their holdings to the *Union Catalog*, and of furnishing cataloging copy for Library of Congress printed cards. The collaborative production of the *Author Catalog* of the Armed Forces Medical Library (previously the Army Medical Library), as a supplement to the *Library of Congress Catalog*, also shows the effectiveness of such action.

The story behind the medical *Author Catalog* includes, in fact, many other instances of cooperative effort. Other aspects of the bibliographic undertakings which preceded it are pertinent, however, and in other ways. The steps taken to provide bibliographic control of medical literature illustrate reasonably well the changing role of government libraries in the production of bibliographies.<sup>3</sup>

The first series of the *Index-Catalogue of the Library of the Surgeon General's Office* appeared in 1880, in sixteen volumes. The object of its founder, John Shaw Billings, was to provide the medical fraternity with a permanently useful catalog, to be kept up to date by supplements, of the holdings of the largest medical library in the world, and, in addition, to supply a bibliography of the more important articles in the medical journals which formed a significant part of the collection. It evidently seemed reasonable, particularly since he had chosen to arrange the entries alphabetically under subject, and to subdivide systematically and alphabetically by specific subjects, to include both periodical articles and monographs in the same list. Probably, however, the main reason for the eventual failure of the *Index-Catalogue* was the combining of materials largely of immediate interest with those of less timely but more permanent concern, in a publication scheme suited chiefly to long-continuing uses. It was a compromise between "current" and "retrospective" bibliography in the sense in which these terms are used in this paper.

Another compromise between basically different concepts was related to the completeness of coverage. Comprehensiveness was the objective in listing monographs, though even this end was frustrated by the time involved in compilation and printing. Selectivity was the aim in listing periodical articles; the important journals were well represented by index entries, whereas those of less importance received little consideration. Comprehensiveness and selectiveness are opposing purposes, seldom successfully combined in the same work.

While Billings ingeniously provided a systematic subject approach that was also alphabetic in arrangement, it very probably contributed substantially to the difficulties of compilation, and consequently to the cost of publication. In spite of its excessive cost and the delays it caused, it continued through three series and part of the fourth before a decision was reached, in 1950, to bring the entire enterprise to an end.

The periodical-index aspect of the *Index-Catalogue* was not intended, even at the outset, to satisfy the need for current listings of new writings on medicine. This was the function of the *Index Medicus*, a *Monthly Classified Record of the Current Medical Literature of the World*, which first appeared in 1879. Although conceived, planned, and compiled by Billings and his editor, Robert Fletcher, it was published commercially until 1903. From then until its merger with



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the American Medical Association's *Quarterly Cumulative Index* in 1927 it was supported partly by Carnegie funds.

Under a new title, *Quarterly Cumulative Index Medicus*, the American Medical Association carried on the current service from 1927 until 1931 with the assistance of the Army Medical Library, and thereafter by itself. However, the Library resumed publishing, in 1941, a current service, privately sponsored, in an effort to compensate for certain weaknesses in the *QCIM*. Difficulties mounted during the war years until it became evident that extraordinary measures were required.

In 1948 a Committee of Consultants for the Study of the Indexes to Medical Literature Published by the Army Medical Library<sup>4</sup> was formed under the chairmanship of Lewis H. Weed. Chauncey D. Leake succeeded as chairman the following year, when illness required Weed to withdraw. Composed of experts in the literature of medicine and government librarians having experience in the production of bibliographies, the Committee recommended the discontinuance of the *Index-Catalogue* and the formulation of a new publication plan. The general features of this were announced to the medical profession in 1950.<sup>5</sup>

The plan as announced by Major (now Lt. Colonel) Frank B. Rogers, Director of the Army Medical Library, recognized the basic bibliographic and service differences between books and periodical articles. First, the current index was to be limited to selected articles from the medical journals of the world and a few "unpublished" research reports, and was to be issued monthly under the title *Current List of Medical Literature*. The monthly numbers contain, in the first place, a listing of tables of contents of the various journals indexed, arranged alphabetically by title of journal; and second, a subject and author index. A cumulated author and subject index is issued annually.

The other important segment of the publication program of the Armed Forces Medical Library was concerned with monographs. A current service was provided by rendering available to subscribers catalog cards for titles not already represented by Library of Congress cards. Arrangements were made for distribution by the Card Division of the Library of Congress. Further, the plan involved an annual compilation of the titles in question as a supplement to the *Library of Congress Catalog*. This catalog, the *Author Catalog* of the Armed Forces Medical Library, now exists in four annual volumes, for the years 1949 to 1952. The more recent volumes contain a subject index.

Thus the Armed Forces Medical Library now supplies comprehensive bibliographic coverage for monographic works in the general field of medicine currently by means of cards, and retrospectively through the *Author Catalog*. It also furnishes a selective but comprehensive coverage of articles in medical journals, and for some unpublished research reports, currently through the *Current List of Medical Literature* and retrospectively through the cumulations of that work.

It is not possible to review here many case histories of bibliographical publications, even though it would be helpful in emphasizing present-day problems. Other substantial enterprises having their origin in the nineteenth century include the *Bibliography of North American Geology*<sup>3</sup> and its successors, begun in 1886 by the Geological Survey; the *Catalog of Copyright Entries*, originally issued by the Treasury Department, which dates from 1891; and the *Monthly Catalog and Catalog of the Public Documents*, issued by the Superintendent of Documents, which began publication, respectively, in 1895 and 1896.

Bibliographic undertakings of substantial size were not especially numerous during the early years of the twentieth century, but some were remarkably virile. The Library of Congress began its *Monthly Checklist of State Publications* in 1910, and its *List of American Doctoral Dissertations* in 1912. The latter gave way in the thirties to an Association-sponsored publication which is now itself apparently in process of transformation.

The new field of aeronautics received sustained attention from government libraries beginning as early as 1910. The first of three bibliographies in the field of agriculture began publication in 1925 and continued until 1942, when the three were incorporated into the *Bibliography of Agriculture*. This was issued by the Department of Agriculture Library, on a plan which furnished much guidance to the Army Medical Library in the study leading to the reorganization of its bibliographic program.

While all of these were serial publications, providing mainly a current comprehensive service limited to large subject areas or certain form groups, other bibliographies were essentially retrospective in content and substantial enough in scope to warrant mention. *Dramatic Compositions . . . 1870 to 1916* was issued by the Copyright Office in 1918; *The Tariff* by the Tariff Commission in 1934; *Guide to Manuscripts Relating to American History in British Depositories* by the Division of Manuscripts, Library of Congress, in 1946; *Catalog of*

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*United States Census Publications, 1790-1945* by the Census Library Project, Library of Congress, 1950; and *Motion Pictures, 1912-1939* by the Copyright Office in 1951.

Responsible officials of the government are inevitably cautious about undertaking projects without a clear mandate to do so. The preparation of bibliographies, particularly those on a continuing basis, may be conducted with all other conditions favorable—evidence of need, access to materials, a qualified staff, effective techniques, adequate printing funds, an efficient distribution system—and yet be unsound if authorization is not clearly stated and incorporated in federal law.

Two illustrations will serve to show how widely such legislation can vary between the general and the specific. The existing copyright law requires that the Register of Copyrights "shall fully index all copyright registrations . . . and shall print at periodic intervals a catalog of the titles of articles deposited and registered for copyright, together with suitable indexes. . . ." <sup>6</sup> This section has not changed since 1909, when the last complete revision was passed. Preceding the congressional action which produced it, however, were years of drafting, after consultation with representatives of various interests concerned. In the original version prepared by Thorvald Solberg (then Register of Copyrights) not later than 1906, the form and substance of the needed cataloging and indexing operations as he saw them were delineated in considerable detail. The language was substantially changed and abbreviated in the Act as passed, for reasons which can only be conjectured. In effect, however, it provided the legislative authority for the continuation of the *Catalog of Copyright Entries*, which had been begun in 1891, as the result of special legislation, to prevent the importation of books infringing works of United States authors.

A recent legislative enactment handles a similar situation in quite a different manner. This law <sup>7</sup> provides the authority for the publication activities of the Office of Technical Services in the Department of Commerce, and encompasses the following: (1) the purpose of the legislation (i.e., "to make the results of technological research and development more readily available to industry and business, and to the general public . . ."); (2) the establishment of a "clearinghouse for the collection and dissemination of scientific, technical, and engineering information"; (3) the specification of the functions to be performed and the kinds of publication forms which might be em-

ployed (i.e., "abstracts, digests, translations, bibliographies, indexes, and microfilm and other reproductions . . ."); (4) the delineation of other rules, limitations, and standards necessary to make the program effective. This rather elaborate legislation at least has the merit of providing the administrator with a clear statement of purpose and considerable freedom in selecting the devices required for the job.

While many other bibliographic enterprises are authorized by specific legislation of this nature, particularly those that have a continuing function, most single works achieve publication, if at all, only as by-products of other activities. The majority of brief, highly selective bibliographies are prepared by government librarians in response to some specific demand made upon them by a staff member or unit of the sponsoring agency in connection with its work. With the specific demand satisfied, bibliographies then either are discarded, filed away for future reference, or duplicated in few or many copies, depending upon the value of the lists and the known or presumed interest in them. For many years a list of bibliographies produced in federal libraries was published as a regular department of *D.C. Libraries*; though this department has been given up, the bibliographies are currently reported to the *Bibliographical Index*.

It is always a matter of concern to the federal library whether a particular bibliographic activity can properly be extended to general public use, particularly where such an extension involves a substantially larger amount of money than would otherwise be necessary. As Rogers and Adams<sup>3</sup> point out, Billings met this question in the 1870's, and sought and obtained public funds for the *Index-Catalog*; he did not attempt, however, to secure an appropriation for the current service, *Index Medicus*, but turned instead to the commercial bibliographic publisher of the time, Frederick Leypoldt. As a result, the status of the indexing of the current periodical medical literature remained uncertain. In 1951, the problem was squarely faced by the Committee of Consultants, and its final summary report recorded one of its policy recommendations, as follows:

The Committee formally expressed its opinion that the cost of a medical indexing service is properly a Federal responsibility. Within the past hundred years there has been in this country and throughout the world increasing recognition of governmental responsibility in the health field; medical services and related activities are fundamental to the national welfare. Over the years the Army Medical Library has

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amassed the most important collection of medical literature in the world; the quantity is too great for any private organization to handle, and it is incumbent upon the Government to provide those indexing services which will make useful the great collection it has assembled.<sup>4</sup>

While comprehensive bibliography presents the most challenging of problems, selective bibliography constitutes a major activity of federal libraries. The preparation of selective lists is almost always undertaken in response to specific demand. Many are duplicated in anticipation of future requests, or are made available generally when general public interest can be gauged. At the same time numerous others, requiring quite as much labor and knowledge, are made solely in response to the immediate need, and are never published. Typical of the hundreds of such bibliographies produced in one library in a year, and delivered to the consumers on typed sheets or simply as a file or as separate entries on cards, are the following: "American views on France, 1870-1951; a list of current periodicals of the United States, selected for the National Library of Pakistan at Karachi; a reading list for State Department employees going to Japan; economic and social conditions of Asiatic Russia; and the Indochina-Thailand border dispute."<sup>8</sup>

Examples of those which reach publication may be found in the index of any issue of the *Monthly Catalog* of the Superintendent of Documents. The following subjects are typical: agricultural publications; angling and fishing equipment; atomic power; automotive reports; modern Chinese law; German and Japanese technology; glass-making and the optical industry; health and safety in mineral industries; heating problems; home-building and maintenance; housing; jet propulsion; polymers; psychology; rectifiers, selenium; research in foods; the Tennessee Valley Authority; gas turbines; personnel administration in the TVA.<sup>9</sup>

So much of such publication is a by-product of normal service demands upon federal agency libraries that its appropriateness can hardly be questioned, and there is no reason to expect any immediate diminution of it. Nevertheless, the situation tends to be chaotic, and to produce lists varying greatly in selectivity and value.

The compilation of selective bibliographies has tended to be confined within the rather narrow limits of works currently available in print, of items in a particular agency library, or of works within a broad or, more often quite specific, topical field. The subject approach to materials in book form, through classification or subject headings or

both, remains, as it doubtless always will, the primary means of dividing into manageable segments the whole realm of knowledge.

Materials in the shape of books, however, no longer hold exclusive claim to the bibliographer's attention. True, such products of printing techniques as maps, prints, books for the blind, and even photographs, long have been acknowledged passively, albeit grudgingly, to have a marginal place in the librarian's sphere, although as a rule not a sufficiently important one to receive bibliographic attention for their own sake or in their own terms. Even microfilm has found a place, for while it could be used only with the aid of a machine, it could be described bibliographically in spite of its physical form.

The motion picture, however, was definitely an interloper. A machine was required in order to use it, and someone had to learn how to operate the machine. It could be used only under certain lighting conditions. It presented completely new and quite horrific storage problems. It virtually defied description in the familiar bibliographic terms. It seemed to have its own perverse way of failing to conform to familiar subject concepts. The spectacular growth of government film collections during and after the war finally forced the issue—some means of bibliographic control had to be found.

Cooperative action provided the answer. As a result of improvements made after 1945 in the cataloging of motion pictures in the Copyright Office (which had been publishing separate listings of such pictures in its *Catalog of Copyright Entries* since 1912), and of the impetus provided by the then-existent Motion Picture Division of the Library of Congress, the Library was approached by the Office of Education for cataloging assistance when assigned responsibility for the recording and distribution of all government-produced film available for public use. Working together, representatives of these and other agencies formulated rules for the cataloging of motion pictures. The results were accepted as standard by the American Library Association, and now are the basis of the printed cards distributed by the Card Division of the Library of Congress.<sup>10</sup>

Direct bibliographic outcomes of this activity have included, in addition to the semiannual motion picture catalog of the Copyright Office, the reorganization of the *Library of Congress Author Catalog* into a new format. After careful consideration of the problems of production and the merits of possible publication plans, the decision was to provide separate listings for the author alphabet for books, films, maps, and music and phonorecords, but to continue to provide a

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subject catalog for books. Although printed cards had been made for maps and music for some time, there had not previously been motivation for their removal from the *Author Catalog*. The completion of a preliminary set of rules for phonorecords, and the production of printed cards for them, rendered the separate listing of music and recordings desirable beginning in 1953.

Explorations into this problem have refocused attention upon the other not-quite-book materials, such as music, prints and photographs, and manuscripts. It is apparent, of course, that the task of describing many of these works in a simple entry, coordinate with those used for books, is new to librarians. Much more important bibliographically, however, is the fact that the author-title relationship so characteristic of books is not by any means so clear or so pertinent in some other materials.

On the whole, it seems logical to assume that the predominant use of nonbook materials will proceed initially from an interest in or concern with the physical form, rather than otherwise. The inquiry will be "I want a motion picture on . . ." or "I want a map of. . ." The most likely secondary approach would seem to be that of subject, assuming that users ultimately will be prepared to employ materials freely in more than one form. Author and title approaches will have scant favor, especially with pictorial matter, for a long time to come.

Among the book-like materials there is another intruder. The bibliographical services which have been set up since the war to provide scientists and technicians with reports on current happenings in their special fields have been built around "research and development" reports. These are written, they have authors and titles, and they are eminently capable of subject analysis. Very often, however, they are not publications within the usual meaning of the term, even though many are produced in quantities by some duplicating process. Most are "unpublished" in that they are not freely distributed, being available only to a limited or restricted group; nor have they undergone the editorial scrutiny and acceptance which is ordinarily a prerequisite to scientific "publication." Their essential purpose is to make known, within the confraternity of scientists and technicians working predominantly on contractual projects, the results and techniques of experiments and tests, in order that research once performed need not be duplicated. As concerns bibliographical control these reports are a special form of material.

It is very difficult indeed for a nonscientist to assess and evaluate

the phenomenal development of research reports, and of the elaborate bibliographic machinery for their dissemination which has been developed. The illustration cited earlier regarding the legislative authorization of the bibliographic functions of the Office of Technical Services constitutes also a demonstration of the important place the operation occupies in the federal scene. It is a phenomenon, at all events, of the scientific revolution ushered in with the atomic bomb.

Dating from 1945, reports of experiments conducted in dozens of research centers have streamed forth, first for distribution to carefully circumscribed lists of agencies under security classification, and later to the general public, after restriction no longer was needed. With various agencies having responsibility for different parts of the research program the problem of securing effective diffusion early became critical. Bibliographic control of these materials has been recognized as an appropriate function of bibliographic centers; hence the reports issued by many of the research agencies have been handled for some time by the Library of Congress. During fiscal 1952 such agencies transferred more than \$2,135,000 to the Library for the conduct of research studies and the dissemination of reports, and for bibliographical controls.<sup>11</sup>

At the present time the principal bibliographies of research reports which are available for public distribution are the monthly *Bibliography of Technical Reports*, issued by the Office of Technical Services, and the *Monthly Catalog* of the Superintendent of Documents. Reports which emanate from research installations of the military services, and which are restricted in their distribution, are listed in the *Title Announcement Bulletin*, prepared at the Library of Congress but distributed within a group of authorized users by the Central Documents Office of the Armed Services Technical Information Agency at Dayton, Ohio. *Nuclear Science Abstracts*, issued by the Atomic Energy Commission, Oak Ridge, Tennessee, also is a restricted service, as in considerable measure is that furnished by the National Advisory Committee on Aeronautics. A number of other agencies still retain control of the distribution of their own reports.<sup>12</sup>

Here again the peculiarities in the form, purpose, and use of the materials tend to place them in a special category. Within this limitation, the bibliographical services rendered are current and comprehensive; subject content is controlled, of course, by the specific assignments undertaken.

In view of the rapidly expanding services being offered in libraries



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through new media of communication, including works other than those printed from type, it would appear that the novel materials require recognition of physical form as a basic bibliographic subdivision, at least for the immediate future. They cannot be shelved like books, described like books, or used like books; before films and recordings will reveal their contents they must be decoded by machines. Knowledge of its physical nature is usually prerequisite to a search for a specific work. Approach by subject, on the other hand, does not necessarily imply restriction of interest to any particular physical form, and consequently argues for the extension of existing subject controls to provide coverage of all library materials without regard to form.

As was noted in the case of the Armed Forces Medical Library, a characteristic of most government bibliographies is that they locate copies—they usually are, in fact, lists of works available in a given library. Recognition of the appropriateness of this function, and of its value to the research worker, has helped considerably to provide a sound rationale for bibliographic production.

In the reorganization of the *Library of Congress Catalog* which became effective at the beginning of the present year the concept of the *Catalog* as a list of national library holdings was considered basic. For the Library of Congress the decision clarified considerably the role of the *Catalog* within the fabric of its bibliographical activity. Recognition of the function at once made plain that the *Catalog* should become one of the most important aids to national and international scholarship; that it might, indeed, aspire to the status of a national union catalog in book form. By providing for the separate publication of parts devoted to maps, motion pictures, and music it acknowledged the need for access by form of material. By providing a topical approach to all resources through the use of uniform headings it acknowledged the universality of subject interest regardless of physical form.

The production of bibliographies has always been among the most costly kinds of publication. Chiefly for this reason the major government bibliographies are now produced by techniques which take full advantage of economical production methods. The widespread development of the nearprint processes has provided publishers of research materials with inexpensive substitutes for letterpress printing. Consequently, they have been widely employed in the government.

Such printing methods do entail limitations. From the bibliographer's

point of view a major one is imposed by the typewriter keyboard. Lack of typographic variety often poses a problem, although it has encouraged simplification of bibliographic entries. While some progress has been made in this direction, formidable obstacles remain.

It has been found practical, however, to extend economical techniques to cards as well as book pages. More significantly still, it has been found possible to use the cards themselves as typographic units in the compilation of bibliographies, rather than type. A substantial part of all government production of bibliographies is accomplished in this manner today.

In addition, many government agencies have explored the application of new machine techniques to the issue of bibliographies. One currently published compilation, for example—*Serial Titles Newly Received*—is produced by means of an electric typewriter actuated by IBM punched cards. The use of such techniques, even though in a limited way, has received a great deal of attention in the library press and holds promise for the future. It must be granted, however, that the catalog card and the book-form bibliography continue to be the favored forms of bibliographic publication.

The development of nearprint printing processes has made it possible for thousands of items to be issued by the government which in earlier days might never have been published. One result has been to increase to a substantial degree the number distributed directly by the agencies themselves rather than by the Superintendent of Documents.<sup>12</sup> From the librarian's point of view this certainly has not been entirely desirable, since it complicates very greatly the problem of ordering and securing the documents desired in a particular institution. All agencies, as well as the Superintendent of Documents, continue to struggle with this problem, and all realize its unfortunate features; nevertheless, it has seemed in most instances that the best interests of the public would be served by special arrangements for certain publications. In any event, the common objective both of the Superintendent and of the issuing agencies is to render the results of their work available as widely as possible.

The never-ending struggle to make services widely accessible, at the lowest possible cost, has recently had beneficial results at least in promoting the use of rapid communication systems. Active experimentation on the part of the government itself, and in cooperation with manufacturers of communications equipment, continues to go forward at a steady pace. Certain agencies closely related in function

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but situated many miles apart have successfully and efficiently employed such different devices as teletype and the transmission of facsimiles by wire.

The role of the federal library community in national and international bibliographic production has been the topic of recurring investigation. A brief review of some of the important developments of recent years will illustrate the forward-looking view of librarians, both within and outside government service.

In his report to the Advisory Committee on Education in 1937, Carleton B. Joeckel, chairman of the Special Committee on Federal Relations of the American Library Association, recommended the establishment of a Federal Library Council "to coordinate the policies and procedures of the libraries of the Federal Government"; the expansion of cataloging and classification services with respect to coverage, speed, and simplification; and the organization of a National Library Information Center at the Library of Congress to become a "central headquarters for bibliographic information."<sup>14</sup>

A proposed indexing and abstracting service was outlined in 1945 by Barbara Cowles, chairman of the Joint Committee on Indexing and Abstracting, to be located at the Library of Congress and financed by subsidy from learned societies, the government, and grants-in-aid. The plan of the Committee provided for the indexing on a current basis of books, general periodicals, society publications, and documents; and for cumulations, as well as for abstracting, in each of fifteen subject disciplines.<sup>15</sup>

In November of the following year the Conference on International Cultural, Educational, and Scientific Exchanges, held at Princeton University, invited the Library of Congress to formulate and present to the library associations of the country, for study and review, plans for the production of a complete current national bibliography of the United States, including proposals not only for the coordination of existing government and private efforts in this field but also for the inclusion of materials not otherwise under bibliographic control. In June 1947, Luther H. Evans, Librarian of Congress, transmitted to the Executive Secretary of the A.L.A. a review of some of the problems involved in achieving this goal, prepared by Paul Vanderbilt of the Library staff. This paper further indicates the remarkable degree to which the Library's *Cumulative Catalog* (now the *Library of Congress Catalog*) is suitable for forming the nucleus of such a bibliography.<sup>16</sup>

In preparation for a conference on the state of bibliographic services

throughout the world, called by Unesco and held in Paris in 1950, the Library of Congress undertook to prepare a working paper. This effort resulted in the publication in 1950 of *Bibliographical Services, Their Present State and Possibilities of Improvement*.<sup>17</sup> In response to Unesco's request, official contribution of the United States to the work of the meeting was contained in *The United States Report on National and International Bibliographic Problems*, prepared by Jesse H. Shera, chairman of the American Library Association Bibliography Committee.<sup>18</sup>

These and other reports, and the discussions which ensued, led directly to the Conference on Bibliographic Organization, conducted by the Graduate Library School of the University of Chicago in July 1950. In their entirety, the papers presented at this conference are most impressive.<sup>19</sup>

While Unesco's Libraries Division was gathering data on bibliographic organization, its Copyright Division was preparing for the meeting held in Geneva in August 1952 to consider the drafting of a Universal Convention which would be acceptable to copyright interests generally. At this writing one nation has ratified the Convention, and work is in progress in the United States preparatory to the presentation to Congress of legislation required to secure U.S. adherence to the Convention. Ratification by the various nations should strengthen present systems of copyright or legal deposit, and encourage the establishment of such systems where they do not exist.

While Unesco has not yet published a final report on its findings with respect to the bibliographic machinery available in the several countries, announcement has been made that a manual, based upon them, has been prepared by Kñut Larsen and will be issued in 1953, entitled *National Bibliographic Services, Their Creation and Operation*.<sup>20</sup> It is possible to report that, based upon partial returns from the survey, at least twenty-four of forty nations responding possess laws requiring the deposit of literary and artistic works with one or more governmental agencies, usually a national library. In at least fifteen cases legal or copyright deposit copies now form the basis for existing national bibliographies.<sup>21</sup>

This rapid survey respecting improvements in the bibliographic services of the nation—improvements which would, of course, contribute vastly to the international scene—at least indicates the earnest interest in the problems involved on the part of American librarians, whether in government service or not, and of their desire to achieve

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more effective controls. Much of the structure needed already exists, chiefly in the bibliographic publications of government libraries. But it is loosely assembled, and lacks a unified plan. It is a structure produced by a group of architects, each with virtually complete control over a portion of the whole and each with his own set of blueprints. The occupants of the building have so far failed to demand coordination and direction.

Nevertheless, there are encouraging signs. The urgencies of World War II were satisfied by the creation of new services for the control and dissemination of scientific and technical information. These continue to undergo change as technical advances are made in recording and reporting systems. The professional experts still argue the merits of opposing theories of bibliographic organization—comprehensive versus selective coverage, alphabetic versus classified arrangement, card-form versus book-form publication, and other details of technique. Because of successive airings of divergent points of view—or perhaps in spite of them—progress has been made toward greater definition of the purposes served by bibliographies of the past and of the needs to be met in the future. With the growing importance of non-book items has come consciousness of the particular problems they present, and of the necessity to provide for them appropriately in library collections. Increased diversity of materials has been accompanied by an increase in their volume sufficiently substantial to require the exploitation of new techniques, as well as devices for lowering the production costs of bibliographies and indexes. And there has been a growing recognition of the values—and economies—of joint effort in bibliographic production, which may well determine the future of the nation's bibliographic progress.

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## Instrumentation

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PRESSED BY GREAT masses of incoming materials and growing demands for a widening variety of services, federal libraries have been resorting to new and varied means in order to do better, or more cheaply, or with less manpower, the things which they would otherwise do less well, or even not at all. High among these is what might be called instrumentation, that is, the integrating of ideas, systems, and equipment in planning and carrying on their operations. New forms of recording information—such as microfilm, microprint, microcards, miniature printing; sound recordings on discs, tape, and wire; scientific and technical literature in report form—must be placed alongside the more traditional forms of records in books, journals, pamphlets, newspapers, maps, and manuscripts. Similarly, first the typewritten, and then the photostat, and today the microfilm copy, tend to replace interlibrary loans; tomorrow a telefacsimile may provide an even more rapid and perhaps as inexpensive a service. New methods of scanning the records are being devised to perform a more rapid and more precise and subtle job than the older "searching" of the card catalog.

While it is not clear that federal librarians can surmount all their difficulties through instrumentation alone, they are aware of their plight and active in their efforts to achieve success. As befits those who collect, preserve, and dispense the world's knowledge, they are acquiring most of their new ideas, systems, and equipment outside the world of libraries, and by adapting them to their own needs are creating their own mechanisms of service.

### *Photography*

Many of the basic features of instrumentation have been employed in federal libraries for many years, such as the telephone, typewriter, Mr. Gull is Technical Analyst of Documentation Incorporated, Washington, D.C.

printing press, mimeograph, pneumatic tubes, book carriers, adjustable shelving, and that outstanding library development, the unit catalog card and its accompanying cabinets. Libraries seem to have been a bit slow in adding photography to their activities, however, although they have used the services of the photographic laboratories of their agencies for many years. Perhaps the copyright laws and a feeling that scholarship should not be made easy have been partly responsible for this lag. The Photostat was introduced into the Library of Congress in 1912,<sup>1</sup> and served obvious uses in internal administration and in providing photocopies of materials in the Library's collections. In the twenties and thirties it reached a peak of usefulness in the work of "Project A" (extensive copying of records relating to American history in European and other archives) and of "Project B" (the construction of the National Union Catalog in its present form).<sup>2</sup> Except for a period in which there was a generous supply of WPA labor for typewriter operation, photography has continued to be the principal means of copying large catalogs for addition to the National Union Catalog. In recent years this work has been done on 16 mm. microfilm, and black and white drafts suitable for addition to the Catalog have been obtained by making enlargements with automatic equipment on rolls of paper five inches wide. The cards have had to be cut from the rolls and punched by hand, however, and the need for automatic equipment for this task, although blueprinted for several years, has not yet been met.

The Map Division of the Library of Congress has made ingenious use of microfilm and paper enlargements cut into cards in preparing its dictionary catalog of atlases.<sup>3</sup> One of the obstacles to building this catalog was that there were about 1,300 cards of the 4 x 6-inch size. After microfilming these cards, with subject headings and some notes masked out, three enlargements of each card in the 3 x 5-inch dimension were produced, thus making possible an author, subject, and shelf-list record which could be interfiled with other printed, typed, and clipped cards of the same size. Several hundred thousand subject cards are being prepared in a similar fashion for the Cyrillic Subject Union Catalog at LC, in a project which may be finished in 1953.<sup>4</sup>

The microfilming of catalogs at the Library of Congress culminated in 1952 in the copying of the National Union Catalog for preservation purposes, a total of some 11,370,000 cards being photographed on more than 2,600 reels of film in eighty-seven working days. Prints of any or all reels are for sale at four dollars per 100-foot reel, and much



### *Instrumentation*

valuable information has been obtained about the very difficult problem of publishing the Catalog.<sup>5</sup>

Bibliofilm Service, a nonprofit private agency sponsored by Science Service, undertook in 1937 to provide public photocopying for materials in the library of the United States Department of Agriculture and other federal libraries. This was one of the first agencies to employ microfilm on an extensive scale.<sup>6,7</sup> It has given way, as the need has become established and the fiscal and other arrangements could be made, to the Department's own laboratory. The latter furnishes a wide photocopying service in agriculture, chemistry, and technology, for which payment can be readily made, if desired, through the system of coupons maintained by the American Chemical Society. It has provided libraries, too, with the Rapid Selector and the Photo-Clerk, products of the active mind of Ralph R. Shaw, Librarian of the Department of Agriculture. Although advance notice has appeared,<sup>8</sup> the final report on the current experiment with the Photo-Clerk in library operations unfortunately will not be released in time to supply information for this article. It can be said, however, that the Photo-Clerk is currently saving \$18,000 a year in typing costs in thirty operations at the Department of Agriculture Library.

A combined microfilm scanner and enlargement printer will be constructed for the Armed Forces Medical Library, where it has been found that the majority of requests for photocopies are for articles from a small group of about 250 journals. The new machine will speed up service, avoid excessive wear and tear on the bound volumes, and permit the use of the original articles by readers without interfering with photocopy needs. The microfilming of at least a ten-year file of the 250 journals is nearing completion. When photocopies are called for, the film will be placed in the new machine and scanned until the desired pages are located, at which point automatic exposure on paper rolls 8 inches wide and 825 feet long will be made, and the paper will be advanced simultaneously with the exposure. It is probable that this machine will be less expensive than a large Photostat machine.

Microcards, first proposed by Fremont Rider in 1944,<sup>9</sup> are familiar to librarians as a new and valuable library material to contend with in acquisitions, catalog, reference, and circulation work. Until the Office of Naval Research and the Microcard Corporation entered into a contract in 1950 to prepare such cards from the collections of the Technical Information Division of the Library of Congress, microcards were largely used to provide copies of out-of-print items. The

new program changed the emphasis to that of publishing new materials, not for the sake of replacing other forms, but to reduce the loan problems of the Technical Information Division by giving cards away for retention. Microcards are laminated to the regular cards prepared by the Division, which bear usual catalog information and abstracts of the various reports. The Document Service Center at Dayton, Ohio, has experimented successfully with multilithing the text on the back of the developed microcard, thus eliminating the need to laminate two cards for a report. Since a single sheet of negative film is easier to work with than the strips of microfilm which have been used in preparing the microcards, the Library of Congress Photoduplication Service is testing the use of sheet film in the 3 x 5-inch size. While sheet film is readily duplicated on film or on opaque paper, this microfilm eliminates the possibility of including the cataloging and abstracting with the microfacsimile of the text matter, unless it is multilithed on the back of opaque paper.

The microcard program also provides an opportunity to observe, on a large scale, for the first time, the reaction of users to opaque microfacsimiles, since microcard readers were made available to participants in the experiment on a purchase or monthly rental basis. A backlog of requests for materials out on loan was cleared up very rapidly by supplying microcards, beginning in January 1951. One inquiry conducted by the Technical Information Division indicates that scientists and engineers are somewhat better pleased with the microcard program than librarians and documentalists. Dwight Gray, Chief of the Division, who has provided a full account in *American Documentation*,<sup>10</sup> wrote in January 1953: "There continues to be an increase in the number of our customers, scientists, engineers, librarians and documentalists, who specifically request microcards rather than reports on loan."<sup>11</sup> At that date over 600,000 microcards had been distributed, representing 13,000 different reports.

Reflex photography and a dye transfer process are now being employed as an office procedure in some federal libraries, in situations in which one copy, or at most two or three, is needed. The Contoura affords a very simple light source for exposing the paper; and Eastman Kodak, Remington Rand, American Photocopy Equipment Company, and the United States Microfilm Corporation sell developers—all being of their own manufacture except that of the last named firm, which is imported from Germany. The negative and the positive sheets issue from the developer in a few seconds, and they are peeled apart and

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the reverse-reading negative discarded. The positive copy is only slightly damp and dries in a short time. The Copyright Office uses the APECO cylindrical printer for exposing the paper and the APECO Autostat to develop the dye transfer paper; the District of Columbia Public Library uses the Contoura for exposing, and conventional wet chemicals for developing reflex paper.

Completely dry methods of photography are now competing with the older method using wet chemicals. Ozalid, one of the oldest of these, in which diazo dyes are developed by ammonia vapor, has not received wide use in federal libraries because it is limited to copying loose sheets of paper. It is available at the Library of Congress as an alternative to the more familiar blueprint process.

Thermo-Fax is a reflex process dependent on the reflection of heat rays from the characters of the text to be copied. In effect, a light colored substance is burned away from the surface, leaving a copy of the text visible in the dark layer underneath. Since the heat rays are not reflected adequately by certain dyes, this process cannot be employed with all library materials. It is in use at the Library of Congress and the libraries of the State Department for copying correspondence and bibliographies, and in the library of the Weather Bureau in preparing overdue notices.

Xerography can be used as a lens or reflex process, and makes use of the ability of certain metals, notably selenium, to acquire a different electrical charge under exposure to light. Finely powdered carbon and resinous materials adhere to the outline of the original text when the powdered mixture is "flowed" over the exposed plate, and they can be transferred to a sheet of paper by passing the sheet and the plate together under a charged wire. The powder is then fixed on the paper by heating for a few seconds, which melts the resinous materials. Soon after the introduction of Xerox equipment it was discovered that a copy made on a paper offset master provided the lithographic effect, which has led to a joint promotion of Xerox and multi-lith equipment by the Haloid Company, Rochester, New York, and the Addressograph-Multigraph Corporation, Cleveland, Ohio. The combination is used at the Naval Research Laboratory Library and the Library of Congress. Thermo-Fax and Xerography have been described by G. Miles Conrad<sup>12</sup> in *American Documentation*, and James G. Hodgson<sup>13</sup> has compiled a pamphlet entitled *The Use of Xerography in Libraries*.

Several trends are discernible for photography in the federal library-

ies. One is a continuing increase in the size of central laboratory facilities, caused by the growing business provided by the library and its patrons. This condition is exemplified in the Library of Congress, where the Photoduplication Service has a staff of sixty-one persons and a large laboratory of the most modern equipment, purchased on the strength of a self-sustaining business which operates upon a revolving-fund established by the Rockefeller Foundation in 1938.<sup>14, 15</sup> An opposite trend is seen in the growing use of equipment, exemplified by the Contoura, Photo-Clerk, and dye-transfer printing, which can be used at or near the desk of the person who needs photocopies and wishes to avoid the delays associated with remoteness, authorization, accounting, and backlogs of work, which are inevitably encountered in any centralized installation. Dry photography is here to stay and will accelerate the tendency to photocopying at the user's desk, while at the same time its great convenience will lead to continuing improvements, with the quality of wet photography as the goal. Already one man is working to give dry photography the flexibility of wet photography plus the rapid reproductive capacity of the printing press; he is William Huebner,<sup>16</sup> and he described his photronic onset to the Library of Congress Staff Forum in the fall of 1951.

#### *Punched Cards*

In 1940 the Library of Congress installed punched card equipment, produced by the International Business Machines Corporation, to care for the accounting and billing operations of the Card Division. Since then it has been employed for the records for payrolls, leaves, appropriations, budgets, book purchases, war and defense bonds, and book charging, as well as many other specialized uses. The Tabulating Office staff numbers fourteen, and is one of the most heavily burdened of the Library.

The availability of nearly the entire range of IBM equipment in one installation led the Library to study the possibility of preparing catalogs, bibliographies, and indexes from punched cards. While an internal telephone directory and a couple of catalogs of books available to colleges and universities through the Surplus Books for Veterans project were made from punched cards on the IBM tabulator, limitations of typography, of card capacity, and of the time required to arrange and rearrange large numbers of cards, led to the adoption of other methods, principally the cumulative catalog technique described later in this article. An experiment on a larger scale, the in-

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dexes of the *Bibliography of Agriculture* for 1949, which were produced on the IBM tabulator, ended with the same conclusion.

Two Library of Congress publications, however, continue to be prepared from IBM punched cards, i.e., the *List of Subject Headings* of the Technical Information Division and *Serial Titles Newly Received* (1951-52) of the Serial Record Section of the Order Division. The first derives from cards treated on a specially built punch, which are used to operate two specially wired, card-operated typewriters providing upper and lower case characters, Arabic numerals, and all the punctuation marks and symbols of the conventional typewriter. This installation uses equipment which is not commercially available to achieve a satisfactory typography, but at the price of an increase in the difficulty of punching and a slower rate of printing.

The Cardatype and a conventional punch are utilized to compile *Serial Titles Newly Received*,<sup>17</sup> and with them typography is sacrificed to the commercial availability of the equipment, for the Cardatype does not provide lower-case letters. Both of the publications named above take advantage of those characteristics of punched card equipment which appear to be the most useful for libraries, i.e., storage of information, interfiling of new matter, and repetitive preparation of text for expanded or cumulative editions. They are not employed for the control and recovery of subject information, which is one of the principal uses in nonfederal libraries and private installations, especially with marginally punched and notched cards.

Although marginally punched cards, under various trade names such as Keysort, Rocket, Pathfinder, and E-Z Sort, are widely used in industry<sup>18</sup> and in a number of college and university libraries,<sup>19</sup> they apparently have not been widely adopted in federal libraries. They are employed in circulation work in the Armed Forces Medical Library and in acquisitions work in the District of Columbia Public Library. The Research and Development Board, in the Department of Defense, and the Technical Information Division of the Library of Congress, have experimented with Keysort cards. Kathrine O. Murra is planning a McBee Keysort record of a rapidly growing file of information on international organizations in the General Reference and Bibliography Division of the Library of Congress, and the cards are designed to make it possible to lay them out in page form if it should be desirable to publish the file as a book or pamphlet. A Zator installation is in use elsewhere in the Reference Department. The Zator system<sup>20-22</sup> provides 36 positions across the top of a 5 x 8-inch

card and another 36 positions along the bottom. Through the use of Boolean algebra these edges are notched in superimposed random codes, and the desired cards can be retrieved from the file by placing them in a simple electric vibrator, provided with removable needles, which sorts at a rate of approximately 800 cards per minute. This installation employs about 415 descriptors (index terms) for the first 10,000 cards or 10,000 items of information. From one to thirteen descriptors can be used for each card, and a four-position random code pattern has been found satisfactory in recovery operations. At this stage in the specialized requirements of the project employing the Zator system, "it is thought feasible if the research project employs ten or more research analysts upon a special program in which the requirements for information retrieval cannot be efficiently handled by traditional library techniques because the activity is group research with recurring requests for large amounts of information showing numerous interactions and interrelations among the data."

#### *The Rapid Selector*

The Rapid Selector is another example of the difficulty of classifying information where it can be recovered most usefully. One of its basic ideas was developed by Emanuel Goldberg, a Zeiss-Ikon employee, and patented in this country December 29, 1931, as a statistical machine.<sup>23</sup> In the later 1930's it was independently reinvented by Vannevar Bush when he was connected with the Massachusetts Institute of Technology.<sup>24</sup> After World War II interest in it was revived, but the model made there was found to have been dismantled.

In the words of John C. Green, Director of the Office of Technical Services of the Department of Commerce, "The Department of Commerce is particularly eager to see the dream of mechanization of scientific information approach reality because it serves U.S. manufacturing industries through the collection, compilation and distribution of valuable technical information."<sup>25</sup> A contract for the construction of a selector was let by the Office of Technical Services to the Engineering Research Associates, Inc., of Arlington, Virginia,<sup>26, 27</sup> and technical responsibility was entrusted to Ralph R. Shaw, Librarian of the Department of Agriculture. Later, support was secured from the Atomic Energy Commission through the efforts of Mortimer Taube. Shaw has recently received U.S. Patent No. 2,594,358 for the present design of the Rapid Selector.<sup>28</sup>

Briefly, catalog entries or entries and abstracts, or other text, are

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photographed on one-half of 35 mm. microfilm, with subject coding to correspond on the other half. The coding consists of patterns of small opaque dots. When a reel of film is searched, a pattern of dots complementary to those being sought is inserted in the Selector, and the film is run through the machine at a rate of 500 feet, representing 120,000 coded subjects, per minute. Whenever the desired pattern is encountered, it is detected by photoelectric cells, and a flash photograph is taken of the corresponding entry and abstract on fresh film. This film can be developed for use in a microfilm reader, or enlarged on paper for use with the unaided eye. Improvements have been made in the coding patterns by adopting binary and other more flexible numbering systems, in the keyboard for recording the codes, and in the flash camera mechanisms, which were not fast enough in the original design.<sup>29</sup>

### *Cataloging*

Photography, punched cards, and the Rapid Selector were the principal advances in instrumentation which were available or foreseeable when serious consideration was given to finding new techniques for those central activities, descriptive and subject cataloging, upon which all the public services draw so heavily. In this area the possibility of basing new mechanical applications and methods upon a better understanding of the mental processes behind cataloging seemed particularly promising.

While the Library of Congress experimented with multilithed temporary cards in the years just prior to World War II, it has continued to rely upon typesetting machines and the flatbed press to produce its printed catalog cards; but for a decade it has used Standard rotary fluid process duplicators to prepare preliminary cataloging cards. These cards are used in a process which was adopted to keep track of the thousands of books which are always in process of cataloging at any given time. A minimum of eighteen cards is made for each title, and as the title progresses to full cataloging, a copy of the card is used as follows: (1) to show location in the Descriptive Cataloging Division; (2) to show location in the Subject Cataloging Division; (3) to show location on the shelves; (4) as a temporary shelf-list record; (5) as a temporary author card in the main catalog. The first three cards are filed in succession in the Process Information File, from which telephone reference service is supplied during the regular working hours of 8:30 to 5:15, Monday through Friday. All cards are

replaced eventually by printed cards. Other copies are used to advise reference workers of new materials, and some are distributed outside the Library.

The trend was not only toward a better control of incoming materials during cataloging, but toward simpler cataloging, and therefore, it was hoped, speedier and more economical cataloging. It was furthered by a trip across the country in 1943, to visit many of the country's principal catalogers, by Herman H. Henkle, then Director of the Processing Department, and Lucile M. Morsch, Chief of the Descriptive Cataloging Division. The results of this trip were incorporated in a pamphlet called *Studies of Descriptive Cataloging*,<sup>30</sup> in the writing of which Seymour Lubetzky played a principal part. After receiving the report of the Advisory Committee appointed to investigate the subject,<sup>31</sup> Luther H. Evans, Librarian of Congress, directed Morsch to prepare the Library's *Rules for Descriptive Cataloging*,<sup>32</sup> which was published in 1949. The concurrent choice of Clara Beetle of the Descriptive Cataloging Division to edit the second edition of *A.L.A. Cataloging Rules for Author and Title Entries*, and its publication in 1949,<sup>33</sup> ended one phase of the dissatisfaction with the preliminary second American edition of the *A.L.A. Cataloging Rules* in 1941;<sup>34</sup> but it was recognized that rules for the descriptive cataloging of sound recordings, motion pictures, manuscripts, prints and photographs, and books for the blind were lacking, and that the rules for corporate entry, as distinct from those for personal authors, were in need of revision. The continuing work on these rules is described in the annual report of the Librarian of Congress for 1952.<sup>35</sup> Lubetzky is currently working on the rules of corporate entry.

Another step towards simplification is found in Processing Department Memorandum No. 60, April 20, 1949, under which the Library of Congress is establishing the names of personal authors on the basis of "no conflict" with other names in its Official Catalog. This policy appreciably reduces the labor necessary to fix personal names.

Subject cataloging, too, has received its share of attention in recent years, and the first practical treatise in English on devising subject headings is one of the results; this is David J. Haykin's *Subject Headings, a Practical Guide*,<sup>36</sup> written while he served as Chief of the Subject Cataloging Division at the Library of Congress. In his present capacity as Consultant in Classification and Subject Cataloging, Haykin has begun the preparation of a code of rules governing the assignment of subject headings.<sup>37</sup>



### Instrumentation

The past decade has seen the Library of Congress continue the publication of its very comprehensive list *Subject Headings Used in the Dictionary Catalogs of the Library of Congress*, with the fourth edition in 1943 and the fifth in 1948, plus cumulative supplements to date, all from the Government Printing Office. Music was treated last year, with the publication of *Music Subject Headings*.<sup>38</sup> The Technical Information Division has brought out three editions of its *List of Subject Headings*, already mentioned in the discussion of punched cards. This is a consistent attempt to use uninverted headings; and with the unification of the technical information services of the Department of Defense under the direction of the Armed Forces Technical Information Agency, it has become the principal authority for subject cataloging of government-sponsored scientific and technical reports.

The Library of Congress has made a successful effort in recent years to keep all of its classification schedules in print, and those for many of the more rapidly changing subjects have been made available in revised editions, of which one embodies development of Class K, Law.<sup>39</sup> Since 1930 the Library has maintained a Decimal Classification Section in the Subject Cataloging Division, to apply Dewey decimal classification numbers to printed catalog cards for books which are of particular interest to the public libraries of this country, and it has provided space for the editorial staff of the *Dewey Decimal Classification*. While these activities represent real services to the library world, the Library has never supplied a manual on its classification schedules and their use, and such a publication should be of great utility to the several hundred libraries which use the LC classification for their collections. Leo E. LaMontagne is now delving into the history of the LC classification, and it is very much to be hoped that he will be asked to follow it up with a treatise.

Activity in other federal libraries which has affected the trends in cataloging includes production of the following:

The *Army Medical Library Classification, Medicine*.<sup>40</sup> The American Library Association survey made in 1944 recommended, "The best classification scheme that could be devised for the Library would be one which combined the notation of the Library of Congress system with the basic plan of the Cunningham classification."<sup>41</sup> This recommendation was followed, and the letters QS through QZ, and W, which were unused in the LC classification, were used in developing the new classification. Medical libraries which wish to adopt the LC

notation now have a choice of the older R schedule or the newer QS-QZ and W schedules for medicine.

*Subject Headings Used in the Catalogs of the U.S. Atomic Energy Commission.*<sup>42</sup> This list is the authority for subject cataloging in sixty-five libraries of the Commission and its contractors, and can be used for the many AEC reports in other libraries. Other subject headings lists from federal libraries are reported on in the *Journal of Cataloging and Classification*.<sup>43</sup>

*TIP* cards and abstract bulletin. From 1947 into 1953 the Technical Information Division of the Library of Congress prepared catalog cards with abstracts and tracings, its abstract bulletin, the *Technical Information Pilot*, and indexes to the abstract bulletin, all from one original typing on cards. In doing so it used photographic reduction, multilithing, and the cumulative catalog technique.<sup>44</sup>

The catalog cards of the National Advisory Committee on Aeronautics. Since 1947 the Division of Research Information has provided catalog cards for each report on sheets placed in every report, from which the cards can be cut for use in libraries. In addition to the descriptive information, these cards provide an abstract, and subject and author-title tracings. The tracings are on the right margin, as is true with the *TIP* cards.

The Veterans Administration Library Service presents a picture of instrumentation centered on cataloging, but involving new selection and acquisitions techniques as well. The Administration is currently operating a thirty-year-old library system, involving approximately 450 separate libraries, hospitals, and regional offices throughout the country. Some of the libraries provide recreational and educational reading for the patients, and others offer reference and research service to the medical and hospital staffs. One of the truly dramatic features is the projected book, which can be read on the ceiling by seriously disabled patients.

The year 1945 appeared to offer a splendid opportunity to establish a program of centralized book procurement and cataloging. In 1946 the Library Service secured authorization to perform its own book procurement, and in 1947 a system of centralized cataloging was placed in effect, to supply catalog cards to all the general and medical libraries in the various installations.

The field librarians retain responsibility for book selection. In order to provide specialized book-reviewing information, to guide in book selection, and to supplement existing trade media, the Book Review

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Division in Washington keeps them continuously advised of new publications, with emphasis on the suitability or unsuitability for use in hospitals. The field librarians select the material needed in the local libraries and forward requests weekly to Washington, in accordance with the quarterly budgetary allocations.

On receipt of such requests the Technical Processes Division in Washington groups orders from several stations for the same book, for rapid and efficient handling of purchase orders. These are written from IBM punched cards containing all essential information, such as dealer's name and address, author, title, list price, and discount. The books are shipped from the dealers directly to the hospitals or regional offices; but the covering vouchers are returned to Washington, where payment is made on the basis of signed receipts from the station librarians.

The cataloging of all titles so ordered is performed centrally in Washington, without reference to the books themselves. Cataloging information is obtained by searching standard sources of bibliographical information, and through use of catalog cards of the Library of Congress and the Armed Forces Medical Library. Traditionalists may view this kind of cataloging with alarm, but the results are convincingly satisfactory.

Catalog cards are reproduced on Elliott stencil addressing equipment. The bibliographical information pertaining to each title is typed in capitals on a special stencil, which provides a field allowing nine lines of thirty-two characters each. Separate stencils repeating the entry information are cut for each of the subject headings and added entries, as well as for the book-charging card and book pocket. Cards are thus reproduced with and without headings on the addressing machines in the quantities required by current ordering, and a limited stock of catalog cards, book cards, and pockets is established to take care of future orders. Because there is normally a delay in supplying books from the dealers, the cards and pockets usually arrive at the field stations in advance of the corresponding books.

The use of mechanical equipment at one central point to order books for 450 libraries eliminates the necessity of maintaining duplicate files of order records throughout the library system, and enables a small staff to operate a procurement program spending over \$700,000 a year for books and magazines. By cataloging without reference to the books, a staff of three professional catalogers and fifteen clerks and clerk-typists performs the cataloging, and supplies the catalog

cards for all books purchased for the 450 libraries, a total of 250,000 copies of 14,000 titles annually. Studies of this operation indicate that it is at least 50 per cent cheaper to catalog in Washington than in the field, and the field librarians' time is free for direct service to the patients and hospital staff.<sup>46, 46</sup>

#### *Catalogs in Book Form*

The Library of Congress has pioneered in producing catalogs in book form from catalog cards as the original copy. The Union Catalog Division's files contain photostats, made as early as 1928, of typed cards laid out in columns to make up a page.

By 1940 a group of forward looking librarians headed by William Warner Bishop, then Librarian of the University of Michigan, realized that the idea of depository catalogs consisting of Library of Congress printed cards had run into a practical snag simply because so many cards had been printed and deposited in forty years that the recipients could not afford to house and file the incoming ones. Yet the need of the information contained in such a bibliographical and cataloging tool was greater than ever. Photo-offset lithography, which had grown apace during the same years, seemed to offer the best solution for converting an author file of Library of Congress cards into a catalog in book form. The Association of Research Libraries obtained the permission of Archibald MacLeish, then Librarian of Congress, to copy the cards, and secured Edwards Brothers, Publishers, of Ann Arbor, Michigan, to undertake the photo-offset lithography and binding. James M. Boyland oversaw the arrangement of the cards in Ann Arbor, and John W. Cronin, of the Library of Congress, read each of the more than 100,000 pages in Washington, before printing, to check on the order of the entries. The result was *A Catalog of Books Represented by Printed Catalog Cards in the Library of Congress to July 31, 1942*,<sup>47</sup> in 167 volumes of about 600 pages each. Subsequently there was issued a *Supplement through December 31, 1947*,<sup>48</sup> in 42 volumes. The basic set and the supplement, popularly known as the Edwards Catalog, immediately joined the ranks of the other great printed library catalogs, principally those of the British Museum in London and the Bibliothèque Nationale in Paris.

There were technical difficulties with these volumes which caused a considerable waste of paper. The cards had been printed for card catalogs with wide margins at the top and left edges for headings and call numbers, and the lines were spaced out for aesthetic effect. Henkle

### Instrumentation

and Cronin presented this problem to the Government Printing Office; and Philip L. Cole, then Director of Planning Service, and R. C. Smith suggested that the lines of type could be rearranged as the cards were printed daily, and invented the Card Aligning Device<sup>49</sup> on which the cards could be placed in page form. With the lines closed up and with narrow margins at the top and left edges, it was possible to lay out an average of thirty-nine cards per page, compared to eighteen in the Edwards Catalog, with a slight increase in the size of the type as well. Monthly issues and quarterly cumulations in author arrangement were published during 1947 in developing the technique experimentally, and in 1948 *The Library of Congress Cumulative Catalog* became the continuation of the Edwards Catalog and its Supplement.

Further experimentation led to *The Library of Congress Subject Catalog* in 1950, at which time the *Cumulative Catalog* became *The Library of Congress Author Catalog*. In 1950 a newly available low-tack Scotch tape was adopted for holding the cards in place for the camera; and it became possible to discontinue the preparation of multiple sets of cards, one for each cumulation, which had been necessary because the high-tack Scotch tape damaged the cards when an attempt was made to strip them from the cardboard for subsequent use. The technique of preparing these catalogs is described in detail in *American Documentation*.<sup>50</sup> The inherent flexibility of the technique is silently acknowledged in the announcement that, commencing in 1953, separate parts will be available for maps and atlases, films, and music and phonorecords, all as component parts of a general *LC Catalog*.<sup>51</sup>

The cumulative catalog technique is not dependent upon printed cards and the rearrangement of slugs of type, but is equally satisfactory with typed cards. Several Library of Congress publications, such as the *Monthly Checklist of State Publications*, the *Monthly Checklist of Russian Accessions*, the *Technical Information Pilot*, and certain parts of the *Catalog of Copyright Entries*, are laid out on the Card Aligning Device, on aluminum mounting boards, or on drafting boards. Paul Howard, Librarian of the Department of the Interior, also has designed a mounting board which is used for an accessions list in his library, and it has been adopted by Clickner in the Municipal Reference Library of the Census Bureau.

The Armed Forces Medical Library has utilized the cumulative catalog technique for its *Current List of Medical Literature* and

has, since April 1948, sold its catalog cards through the Library of Congress and permitted their reproduction in book form as a supplement to the *LC Catalog*. The volumes for 1948 and 1949 were in author order only; the 1951 one was in two substantially equal parts, author and subject, and presumably this will be true of subsequent volumes. All are prepared on the Card Aligning Device.

Nearly everything that might be written about the current rejuvenation of the Armed Forces Medical Library, which dates from World War II, is concerned with instrumentation in its broadest sense. The scope of the Library has been re-examined and new acquisitions policies adopted.<sup>52</sup> As we have seen, a new classification has been devised and accepted; and descriptive and subject cataloging processes have undergone a thorough overhauling.<sup>53, 54</sup> The reference services have been affected only through the acquisitions and cataloging operations, because neither punched cards nor the Rapid Selector is yet a satisfactory substitute for reference workers.

The reorganization of the Armed Forces Medical Library revealed that that mainstay of other years, the *Index-Catalogue of the Surgeon General's Library*, was hopelessly out of date and losing ground every year, due partly to the nature of the cataloging processes and partly to the delays and expense of letterpress publication, but even more to the traditional policy of publishing the full alphabet in one series before starting that in the following series. The *Armed Forces Medical Library Catalog* in two parts—author and subject—is solving the problem for books, both current and retrospective, as recataloging progresses through the Library's collections. The *Current List of Medical Literature* has taken over the treatment of current periodical literature. There remain over a million periodical articles for which copy was prepared but never published in the *Index-Catalogue*. A most desirable development would be for the Armed Forces Medical Library to compile selections from them as speedily as possible.<sup>55-57</sup>

The *Current List* has, commencing with Volume 19, July 1950, contained three parts, viz., a register section, which is a listing of tables of contents of the various issues of periodicals; an author index with six columns per page; and a subject index, of three columns per page. The indexes are now cumulated in June and December each year. All entries are typed and stamped with serial numbers before they are separated as cards for the three parts, after which they are arranged and laid down on the Card Aligning Device. The indexes are true indexes—they refer from authors or headings to the titles by number,

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and do not repeat the information as is done in a subject catalog. The subject heading authority list for the *Current List* has undergone an interesting development, including a rapid compilation of the list by making use of some IBM punched cards already available through the Medical Indexing Project at the Johns Hopkins University.<sup>58-60</sup> Unfortunately for the present article the final report of this Project, a contract let by the Armed Forces Medical Library and under the direction of Sanford V. Larkey, will not be available for summarizing here, but preliminary information is found in the Army Medical Library's Annual Report,<sup>61, 62</sup> and in an article by Larkey.<sup>63</sup>

The Department of Agriculture Library makes use of a modification of the cumulative catalog technique in preparing the monthly *Bibliography of Agriculture*, which, with about 96,000 entries each year for books and periodical articles, is of about the same size as the *Current List*. Entries are typed on slips and arranged in ten broad classes, after which they are numbered and affixed to sheets. No machine is used. The index slips for authors and subjects bear the same numbers as their entries, but only the author slips are laid out for the camera. The subject slips are recopied on long strips, which are then mounted for the camera. The indexes for Volume 13, 1949, were prepared on IBM punched cards, but this technique was abandoned because the typography was unsuitable for high reduction, although the method lessened the workload at the end of each volume.<sup>64</sup>

The principal federal libraries—the Library of Congress, the Department of Agriculture Library, and the Armed Forces Medical Library—have made a complete conversion from letterpress to photo-offset lithography in recent years for their chief book catalogs and periodical indexes, all of which are based on the principle of laying out pages from cards or slips mounted on cardboards for the camera. These techniques have rendered it possible to provide author and subject records to some 280,000 books and periodical articles annually, with the distinct advantages of usable arrangements and timeliness. Since the coverage of the volumes is international rather than national, the collective achievement has no parallel elsewhere.

### Storage

A new type of storage shelving, manufactured by Remington Rand, Inc., has been installed in the libraries of the Naval Research Laboratory and the National War College in Washington, in response to the changing character of published scientific and technical literature,

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which is turning to reports in pamphlet form and away from monographic and serial publications. The shelving, basically similar to nonfreestanding bookstacks, can be used in single- or multiple-tier installations. The shelves can be inserted anywhere vertically on one-inch centers. They are equipped individually with backs about five inches high and are slotted to receive dividers on three-inch centers. These dividers are 4 $\frac{1}{2}$  inches high and serve to keep the flexible pamphlets from sliding over the shelves, as well as to make it easier to see titles and identification numbers on their backs. The new shelving is more economical of floor space than the filing cabinets widely used for storing such materials, because the shelving can be carried up to the limit of 7 feet 6 inches, which is not practical with filing cabinets. The following comparison shows the economy of divided shelves:

<i>Containers</i>	<i>Average number of reports per square foot of floor space</i>
16 four-drawer files in 87 $\frac{1}{2}$ sq. ft.	1344
16 five-drawer files in 87 $\frac{1}{2}$ sq. ft.	1680
4 tiers of divided shelves, each 9 ft. long, in 81 sq. ft.	2940

The libraries in the Navy Department which have surplus reports are fortunate in being able to remove them from their shelves for storage in the nearest Navy Record Center.

The District of Columbia Public Library has standardized all the shelving in its system; it is using bracket shelving made to specifications drawn by Alvan C. Chaney, and the shelving has been built by Sjöström and the Alexandria Woodworking Company, of Philadelphia, Pennsylvania, and the Georgia Showcase Company, of Montgomery, Alabama. This Library is also using a book truck designed by Chaney; shelves are mounted on a dolly measuring 22 inches by 36 inches, and slant inwards so that two rows of books can be placed on one. Since one man can move up to 600 books on a single truck, these vehicles are especially good for large-scale moves.

An interesting phase of storage stems from the work of William J. Barrow, document restorer of Richmond, Virginia, whose laminating device has been used in the Library of Congress since 1947 for the preservation of letters, maps, sheet music, and similar materials. The sheets are protected by laminating them with cellulose acetate and tissue under heat and pressure, after treatment to eliminate the chem-



### *Instrumentation*

ical causes of deterioration. Barrow also discovered that the ink could be transferred in a similar manner from seriously deteriorated paper to rag paper and preserved there by lamination. The Library of Congress has arranged to have a number of volumes treated in this manner annually, raising the interesting question, "Will an ink-lifted first edition become a first edition once removed?"<sup>65, 66</sup>

A very small percentage of library collections is now recorded on microfilm or is found on single sheets for rapid scanning from conveyor belts. Most of the information is in bound volumes or in serial issues in pamphlet form. In recognition of this condition, Taube pressed for the development of flatbed scanning for facsimile communication, to replace, for library use, the more conventional rotary scanning in which the original is wrapped around a cylinder. The result is RCA's flatbed facsimile scanner and receiver, which has been tested by the library system of the Atomic Energy Commission at Oak Ridge, Tennessee. There are now a scanner and receiver in the Loan Division at the Library of Congress, undergoing daily testing.<sup>67-69</sup>

In further recognition that such devices are still in the experimental stages, the Technical Information Division of the Library of Congress has subscribed to unattended teletype (TWX) service, since it found that most of its customers were doing so. With this equipment the Division receives requests at any hour of the day, and replies with reference data or asks for further information. Stimulated by the experience of the Midwest Inter-Library Center and other libraries using teletype, the Library of Congress has installed that system for its regular divisions in the Secretary's Office.<sup>70</sup>

### *Summary of Trends*

Instrumentation has played an ever-increasing role in federal libraries, and it will assume even greater importance in the coming years, for the reasons mentioned at the beginning of this paper. Until now, however, there has been little organized research to discover what can be accomplished by it. One of the most encouraging trends is to be seen in the contract let by the Armed Services Technical Information Agency to Documentation, Incorporated, to study classification systems and lists of subject headings already in use in the Department of Defense, and to recommend a method of controlling subject information which the Agency can use in unifying and directing the technical information services in the Department. The experimental approach required in this contract has already resulted in the

Uniterm system of coordinate indexing, which appears to hold great promise for more satisfactory subject control.<sup>71-74</sup>

The Rapid Selector, Zator installations, and certain mechanical and marginal punched card installations, have one characteristic in common: the complete record must be searched every time a question or a combination of questions is to be answered. Obviously such a search is feasible in a large collection only if the operations are kept at high speed. Years ago, before such machines were conceived of, federal librarians adopted classification of materials on the shelves and subject headings for their catalogs in an attempt to overcome the problem of inspecting all the shelves or of reading all the way through a catalog; but neither classification schedules nor subject headings offer mutually exclusive pigeon holes or concepts, so that it is necessary to search in many places to locate answers. In serious investigation there is always the haunting fear that too few places were searched. The development of coordinate indexing has sharply defined the distinction between systems requiring full and partial searches, for it offers the chance to hunt all the information on one or more subjects without surveying the complete record.

Looking to the future, acquisitions work will certainly benefit from improved communications, and from wider application of the policy of having materials for the United States government collected by the Publications Procurement Officers of the State Department. Catalogers and classifiers will continue to seek improvements in recording devices, perhaps such as RCA's pencil-sized facsimile scanner, and for better methods of author and subject control. Reference workers will go on pressing for better copying methods, more adequate collections and procedures for collecting, better communication between libraries, and faster and easier recovery of stored information, in the amounts and directions they need, whether it be simple or complex. Thus, we can expect to see further work towards Memexes and Rapid Selectors, but we should not overlook the difficulties and probable delays in realizing the millenium.<sup>75-78</sup>

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## Coordination of Information Services

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TO MANY PERSONS the word "coordination" has an unpleasant connotation—it is frequently said that nobody likes to be "coordinated." This feeling is produced, however, only where there is constraint by a higher authority, without due regard for the views of those concerned. Fortunately the trend toward coordination of information services in the federal government rests largely on voluntary efforts. Federal agencies and their information centers are very much aware of the need for increased cooperation, and the value of it. In addition, several bodies interested in scientific information problems, such as the Office of Scientific Information of the National Science Foundation and the former Special Committee on Technical Information of the Research and Development Board in the Department of Defense, have actively encouraged the coordination of technical information services, in order that the services might perform their tasks more effectively and at the same time achieve greater economy and efficiency.

This paper will indicate briefly the character of government information services, as distinct from libraries, and the various types of coordination of their efforts, and the reasons for these; and it will describe several examples of coordination as well as a number of recent and current efforts to promote it.

The phrase "information services in the federal government" could be interpreted broadly to cover a great many activities. Most federal departments and agencies have large collections of data, and many of them publish informational bulletins and periodicals and furnish facts to the public upon request. Certain agencies whose primary function is to gather, organize, and publish data have been an integral

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part of our government for decades. For example, the Bureau of Labor Statistics assembles and analyzes facts from workers, businessmen, and other government agencies, and provides current information on the number of employed workers and on prices in the United States. The Bureau of the Census collects general statistical information on population, housing, agriculture, industries, trades, and governmental units; provides comprehensive data on the economic and social resources of the United States and, through cooperative arrangements with foreign governments, source materials on foreign censuses; and also gathers and tabulates data for other government agencies and assists them in the use of census figures and facilities. Other agencies offering extensive information services as by-products of their principal functions include the Weather Bureau, the Coast and Geodetic Survey, the Hydrographic Office, the National Bureau of Standards, the Patent Office, and the Bureau of Agricultural Economics. The many public information and public relations offices also are playing a vital role in disseminating information.

To hold this paper within reasonable limits the discussion is restricted to those information services most closely related to libraries, that is, the agencies and offices established within the last ten years for the sole purpose of collecting, processing, and distributing data of a specialized nature. Such services work primarily, and in some cases exclusively, with unpublished reports. They prepare and frequently issue bibliographical aids, such as indexes, catalog cards, abstracts, bibliographies, and reviews. Many of them use machine techniques to correlate and sift the collected information. Most of those using machines are experimenting with new methods of organizing and searching.

It is principally in the field of science and technology that the information service, as distinct from the library, is playing an increasingly important role, largely because of the extent to which the results of government-supported research are contained in unpublished reports. In a paper on such materials Eugene B. Jackson, Chief of the Division of Research Information, National Advisory Committee for Aeronautics, emphasized their growing number as follows:

Present day documentation of science and technology involves a newly significant factor that emerged from the Second World War—the unpublished research report. Although the research efforts in science and technology of the laboratories of industry, educational institutions, foundations, and governmental agencies have for some years



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been recorded by means of research reports, they were an insignificant problem for technical librarians. This was due to their small numbers, their prompt conversion into another more conventional form (periodical articles, theses, talks before professional groups), or to their permanent suppression for trade, patent, or military security reasons.

The policy of decentralization of research followed so successfully by the Office of Scientific Research and Development [during World War II] resulted in a veritable flood of research reports. . . . the present estimates of the Research and Development Board show that the seeds sown by the OSRD research program (as continued by the Department of Defense agencies) result in the annual production of between 100,000 and 150,000 research reports.<sup>1</sup>

The bibliographical control of this new form of technical literature presents many new problems; and in recent years the agencies producing large numbers of technical reports have had to establish information services to catalog, abstract, and distribute them, so that scientists and technical librarians might keep informed of current results and be provided with reference tools for extending materials searches to the report literature. These services are being coordinated in several different ways. In one case, to be mentioned later, two previously existing centers are being integrated to form a more comprehensive one. In many more instances, two or more agencies have acted together to establish jointly supported units. A third type of coordination is the current effort, also mentioned later, of several technical information services to standardize some of their products and operations.

The reasons for the current trend toward increased coordination are compelling. The interests of government agencies are so intertwined that, to be well informed on activities in any field, an agency must in some way pool its resources with that of other agencies, either in an interagency information center or through the close cooperation of its own information service with others. Moreover, the volume of materials has grown so large that most efforts to survey completely even a specialized subject are costly and require the support of several interested parties. Standardization is desirable because it enables information services to make use of each other's bibliographic work, eliminates costly duplication, and facilitates the adoption of machine methods.

An obvious spot for coordination of information services to begin is in acquisitions. This is not the place to describe all the arrangements

which tend toward cooperation in the acquisition activities of the federal libraries, but it may be worth while to mention certain activities of recent date which center in the publications-procurement facilities of the Department of State. Prior to World War II the Department, through its Division of Research and Publications, had accepted requests from various federal agencies for the procurement of publications and other library materials—especially those outside of the book trade—through the foreign service posts abroad. At the onset of the war, it was found that on the one hand there was a scarcity of such items obtainable, or at least a scarcity of numbers of copies, while on the other hand there were many new agencies with responsibilities for analyzing materials of this kind in conjunction with the war effort. In consequence, an informal committee known as the Interdepartmental Committee for the Acquisition of Foreign Publications was established. This Committee had an operating staff which collected foreign publications, assured that they were called to the attention of the interested agencies, and performed a considerable amount of analysis and indexing. The creation of the Committee, in consequence, lifted from the Department of State what would have otherwise been an intolerable burden.

At the return of more or less peacetime conditions in 1946 the staff of the Committee was disbanded, and its operations ceased. At this point the Department of State assumed once more its prewar responsibilities for acquisition on behalf of federal agencies, but on a more formal basis than before the war. The work was divorced from the operations of historical editing with which it had been previously combined, and was placed in a new division (which has since become the Division of Acquisition and Distribution), and a number of positions as Publication Procurement Officers were established at the principal foreign service posts. Although the primary objective of the system was to aid the federal agencies, it was also hoped that it might to some extent serve the needs of nongovernmental research libraries whose contribution had been useful during the war.<sup>2</sup> Because of limitations of staff and the pressure of official business, this hope has not been realized. However, the system has been very effective for official purposes; there are now six full-time and fifteen part-time Publication Procurement Officers stationed in foreign countries, and the staff of other foreign service posts are called upon as needed. About 60,000 publications are received each month—most of them being newspapers, periodicals, and other types of serials.

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Two-thirds of this material is obtained at the request of other government agencies, and is paid for, when necessary, by them.

The coordination effected through this operation is merely the informal one exercised by reason of the knowledge regarding the needs of particular agencies which is available to the Department of State, and as the result of which duplicating requests can be curtailed, or, conversely, multiple requests can be satisfied simultaneously, or single copies can be called to the attention of several agencies. In addition to it an attempt was made in 1946 to revive the coordinating activities of the War-time Interdepartmental Committee. A new committee was set up under the chairmanship of the Librarian of Congress, with wide representation of federal libraries. However, for several reasons, not the least of which was that it lacked the operating staff of the older committee, this plan for coordination was abandoned in 1947.

Another office in the Department of State, the Office of the Science Adviser, established in 1950, provides assistance to scientific organizations, both government and private, in obtaining foreign information and publications.<sup>3</sup> Science attachés have been assigned to U.S. Embassy staffs in London, Paris, Stockholm, and Bonn. These representatives **abroad play an important role in international cooperation and the exchange of information, as do their counterparts who represent foreign countries in the United States.**<sup>4</sup> Both groups report promptly to their governments the most significant scientific news, which in turn is distributed by their home offices to interested organizations, and they visit and report on current research activities. They also obtain specific information requested by their countries' research organizations. Their activities are an essential adjunct to the exchange of information in scientific journals, because frequently many months and sometimes years elapse between the completion of research and publication of the findings.

The trend toward coordination of technical information services in government is exemplified by the development of centralized activities in the Department of Defense within the last few years. As a general rule, each bureau or technical service of the military departments has its own special library or information service, whose task it is to collect and organize for reference purposes, and in some cases distribute, the research reports produced by the bureau or technical agency and its contractors. In addition each information service attempts to secure for staff members or contractors of its own organization any needed information, either published or unpublished. A

brief description of a number of these activities may be found in the December 21, 1951, issue of *Science*.<sup>5</sup> Such centers play an essential role in providing detailed, immediate, local, and expert reference assistance for their respective agencies in specialized fields of science and technology. In addition, however, in response to the need for more comprehensive collections of information on research programs of the Department of Defense, two large document centers have served defense agencies for several years and are now being merged into a single service.

Before the cessation of hostilities in Europe the Army Air Force, with the cooperation of the Navy, sent a group of experts to Europe to undertake with the British Air Ministry a joint program of collecting and processing captured German documents. So much material was assembled and sent to London that for the first few months the receipts were recorded in tons per day. A Documents Research Center was established there to screen, sort, and index the materials and distribute the more important ones. In the fall of 1945 the technical documents were shipped to Wright Field at Dayton, Ohio, where the Air Documents Division of the Army Air Corps continued to process the stock with the assistance of representatives of the Navy. Gradually the Division also assumed responsibility for collecting and indexing technical items produced by Air Force agencies, the Navy's Bureau of Aeronautics, and their contractors. In 1948 the activity was renamed Central Air Documents Office (CADO), and became a joint documents center for the Air Force and the Navy's Bureau of Aeronautics under the general policy direction of the Research and Development Board. About a year later the Department of the Army decided to join in the support of CADO and let it serve also as a center for Army technical reports.<sup>6,7</sup>

Toward the end of 1945 the Office of Naval Research made arrangements for the operation of a documents center at the Library of Congress, to serve the entire Department of the Navy and its research and development contractors. It was to collect, catalog, and abstract technical reports issued by Navy bureaus and contractors, to publish abstract bulletins and catalog cards, to prepare bibliographies, to perform documentation research, and to evolve a classification system for research and development projects. The center was first known as the Science-Technology Project, then for several years as the Navy Research Section, and recently as the Technical Information Division of the Library of Congress.<sup>8</sup>

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It was inevitable that these two large document centers, both serving defense agencies and their contractors, should collect and process many of the same reports in an effort to supply their customers with all the information they needed. In the fall of 1949, the Special Committee on Technical Information of the Research and Development Board was studying the feasibility of integrating them. Almost at the same time the Secretary of the Navy suggested to the Secretary of Defense the desirability of a consolidation, and the latter requested the advice of the Research and Development Board. After a series of informal meetings between representatives of the Special Committee and the two document centers, and after careful study of the operations of each center, a plan for integration was presented to the Secretary of Defense. The Management Committee in the Office of the Secretary revised the plan in several administrative particulars, and the directive for the new unified Armed Services Technical Information Agency (ASTIA) was issued by the Secretary of Defense on May 14, 1951. The agency was made responsible for providing an integrated program of scientific and technical report services for the Department of Defense and its contractors. It was placed under the policy direction of the Research and Development Board and the management control of the Department of the Air Force. Several months were required for the selection and appointment of a director for the agency, and it was necessary to work out a detailed plan for the division of responsibilities between the two branches and for security safeguards acceptable to the three military departments.

The Dayton center is now known as the Central Documents Office of ASTIA, and the present plan is that it shall be responsible for the acquisition, screening, reproduction, and distribution of documents, and also the publication of catalog cards and title lists. The ASTIA branch in the Technical Information Division of the Library of Congress is to be primarily a reference service, and will be responsible for the cataloging and abstracting of all documents received and for the preparation of bibliographies.

Probably the most successful example to date of an informal effort to coordinate the operations of information services is known by the name of "the group for the standardization of information services."<sup>9</sup> Early in 1950 representatives of four document centers, the Central Air Documents Office at Dayton, the Navy Research Section of the Library of Congress, the Technical Information Service of the Atomic Energy Commission (AEC), and the Division of Research Information

of the National Advisory Committee for Aeronautics (NACA), began a series of informal meetings to discuss the possibility of standardizing some of their work. They hoped and believed that this would facilitate the exchange of information and eliminate duplication in cataloging, abstracting, and indexing technical reports.

Within a year's time the group had made considerable progress. Its members first agreed that none of the four agencies would thereafter catalog or abstract reports originated by the others, and that each would make use of the bibliographical aids prepared by the others. They accepted a standardized format for catalog cards, so that those printed by all four agencies could eventually be interfiled. The standardized card has been in use now for two years. It is so designed that the master copy can be mounted on sheets and photographed to make pages of abstract bulletins, and later mounted differently and photographed for the index to the abstract bulletins. Thus the cards, abstract bulletins, and indexes can be prepared with only one typing and one proofreading. The group is working on a standardized list of subject headings, and has agreed to use specific rather than general headings wherever possible, and direct rather than inverted form. They also have developed a common principle governing source entries, and undertake to exchange among themselves information about the distribution of their reports. They are considering the adoption of a standardized "data sheet," bearing identifying data, to be issued with all technical reports of the cooperating agencies.

The former Central Air Documents Office and the Navy Research Section now comprise the new Armed Services Technical Information Agency, but the effort to standardize the information services of ASTIA, AEC, and NACA will continue. In addition to enabling each of them to utilize each other's products with the greatest efficiency, standardization is expected to facilitate the use of machine methods in their operations.

Another interesting example of the economies made possible by coordination is to be found in the Technical Information Service of the Atomic Energy Commission.<sup>10</sup> When AEC began to publish *Nuclear Science Abstracts*, it prepared all the digests of published papers as well as those of AEC reports. Shortly thereafter, however, it arranged to have the searching and abstracting of the published literature done under contract by the John Crerar Library in Chicago, because AEC lacked the library facilities and the staff for a large scanning operation. Before long, it was discovered that the task of

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searching more than the limited number of scientific journals in which the bulk of the papers on nuclear science appeared was extremely costly and time-consuming. Nuclear science cuts across many other scientific disciplines, and to locate all items pertaining to the various aspects of nuclear science it is necessary to examine a great many scientific journals. Knowing that the Army Medical Library (now the Armed Forces Medical Library) and the Department of Agriculture Library were regularly scanning many thousands of journals in preparing the *Current List of Medical Literature* and the *Bibliography of Agriculture*, the AEC very sensibly made arrangements with these two libraries whereby their indexers would mark all papers on nuclear science and have them photostated for the AEC at nominal cost. The unit expense per abstract to the AEC immediately decreased. Although this system cannot be said to achieve coverage of every paper of possible interest to nuclear scientists, it is a fairly satisfactory and economical method of doing a job, the cost of which would otherwise be prohibitive. A more detailed account of the cooperative arrangement, and also of the work of the group for the standardization of information services, has been published by Mortimer Taube.<sup>11</sup>

The Office of Technical Services (OTS) in the Department of Commerce is a different sort of information service. Its mission is to collect technical reports from all federal agencies and to make them available to the public. In June 1945 the President issued Executive Order 9568, creating a Publication Board under the chairmanship first of the Director of War Mobilization and Reconversion and later of the Secretary of Commerce, and authorized it to take all appropriate measures to effect speedy declassification of technical reports from military security and to distribute the declassified data to the public. A subsequent Executive Order, No. 9604, extended this authorization to captured enemy scientific and industrial information. Shortly thereafter the Office of Technical Services was established within the Department of Commerce, and assigned certain operating functions under the general authority of the Publication Board. OTS therefore collected copies of unclassified and declassified technical reports resulting from the wartime research and development programs of government agencies, as well as copies of captured enemy documents, and published a periodic bibliography of the reports received. In September 1950 the 81st Congress passed Public Law 776, which defined the functions and responsibilities of the Department of Commerce as a clearinghouse for technical information useful to American industry

and business. Consequently, OTS now concentrates on material of interest to industry. Its monthly *Bibliography of Technical Reports* lists reports received during the month and abstracts many of them, and microfilm or photostat copies may be purchased from the Photoduplication Service at the Library of Congress. Another of its publications, the *Technical Reports Newsletter*, highlights selected items considered to be of special interest to small business. In this way American industries which do not conduct research for government agencies, and which, therefore, are not eligible to use the information services of those agencies, have access through OTS to a large fraction of the unclassified, unpublished results of government research programs.<sup>12, 13</sup>

Several information services in specialized fields of science and technology have been established and supported jointly by two or more federal agencies. The Solid Propellant Information Agency at the Applied Physics Laboratory of Johns Hopkins University,<sup>14</sup> the Deterioration Prevention Information Center at the National Research Council,<sup>15</sup> and the Arctic Roster and Bibliography Project of the Arctic Institute of North America are all sustained jointly by the Army, Navy, and Air Force. The Chemical-Biological Coordination Center at the National Research Council has been maintained by four Army technical services, two naval offices, the Air Force, the Atomic Energy Commission, the National Cancer Institute, and the American Cancer Society.<sup>16</sup> All these centers are collecting large amounts of data, organizing it in various ways, and publishing it in useful form.

The Chemical-Biological Coordination Center, for example, assembles information on the biological action of chemical compounds from selected scientific periodicals and unpublished data, and codes it on IBM punched cards in order to correlate biological effects with chemical structure. It issues bimonthly a series of *Summary Tables of Biological Tests*, and from time to time prepares reviews covering specific topics. It also arranges for the screening of compounds, sponsors symposia, and answers numerous specific requests for information. This agency developed from one of the earliest coordinated technical information units in government, the Coordination Center of the Insect Control Committee, established by the Office of Scientific Research and Development in 1944. The Committee's task was to coordinate the work of government, industrial, and university groups on insecticides and rodenticides; and to facilitate this work the Coordination Center surveyed the available literature, collected and abstracted unpublished research reports, and issued several series of



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abstract bulletins and reviews. It was the demonstrated value of this effort that led to the establishment of the Chemical-Biological Coordination Center.

A center for the exchange of information on current research projects in the medical sciences has been in existence for several years. Shortly after the war, when the United States Public Health Service embarked on an expanded medical research program, an office for the exchange of project information with other government agencies supporting medical research was established at the National Institutes of Health. Five other government offices voluntarily cooperated in this program. By 1949, however, it had become apparent that the exchange could be carried out more effectively, and better services and more comprehensive information could be supplied to the cooperating units, if it were jointly sponsored and directed by the interested agencies. A proposal to establish the exchange on this basis was placed before the Interdepartmental Committee on Scientific Research and Development, and a subcommittee on scientific information devoted several meetings to a consideration of the best means of operation. The result was an agreement that a Medical Sciences Information Exchange be established under the administration of the Division of Medical Sciences of the National Research Council, and that funds for its support be supplied by the six interested government agencies, namely, the Public Health Service, Army, Navy, Air Force, Atomic Energy Commission, and Veterans Administration.

The Exchange was placed in operation in July 1950. It is governed by a Policy Committee composed of the heads of the grant or contract divisions of the six supporting agencies. Concerning each of their awards or contracts for medical or biological research, the agencies supply the names of investigator and institution, the title of the project, and fiscal data. The Exchange then asks each research worker to prepare a 200-word abstract of his plan of investigation. Similar information is also received from the National Science Foundation and about 100 private organizations. To the greatest extent possible the cooperating agencies also keep the Exchange informed of their pending proposals for research grants or contracts. Mechanical aids are used in organizing and analyzing the information. Cooperating agencies are provided upon request with data on sources of support for research institutions, for their departments and investigators, and for broad and specific areas of study, and with lists of investigators and institutions engaged in special types of research. About 14,000 projects have been

reported to date, some 4,000 of them current ones. An extensive analysis of the data compiled by the Exchange appeared in the issue of *Science* for March 28, 1952.<sup>17</sup>

The Exchange has proved to be a useful means of preventing unwarranted duplication of research. It also receives and answers numerous inquiries from investigators concerning possible sources of support and the identification of scientists with related projects.<sup>18</sup>

A number of governmental agencies, such as the Research and Development Board and the National Science Foundation, have taken steps in the last few years to promote cooperation among technical information services. In September 1947 the Library of Congress and the Office of Naval Research jointly sponsored a three-day Conference on Bibliographical Control of Government Scientific and Technical Reports.<sup>19</sup> Some forty agencies, most of them military, were represented. The problems discussed included the following: proper identification of papers, the necessary elements of a title page, preparation of abstracts, dissemination of digests and reports, classification and indexing, and the potential usefulness of machine techniques. Although many government agencies were engaged in cataloging, abstracting, and distributing reports, there was no authoritative source to advise on controversial matters or to take the lead in promoting research in documentation techniques. The Conference therefore was concerned with selecting the most appropriate body to assume leadership in this field, at least temporarily, and voted to request the chairman of the Research and Development Board, in the Department of Defense, "to take steps looking toward the formation of a Federal documentation board . . . to serve as the cognizant agency in connection with the documentation of scientific research and development."<sup>20</sup> The chairman reported some months later that the Board had approved the establishment of a Special Committee on Technical Information.<sup>21</sup> It was called a "Special" Committee, he explained, because the problems involved in the organization of technical information were not unique to the military establishment, and he hoped that once the need for such a centralized group in the government had been well established, the activities would be placed under civilian sponsorship. This has proved to be the result. The Special Committee was recently abolished because its functions have now largely been assumed by the Office of Scientific Information of the National Science Foundation, which has an active program of research on scientific information problems, and the new Armed Services Technical Information Agency, mentioned

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previously, which is responsible for coordinating the activities of information services within the Department of Defense.

During its existence, however, the Special Committee made a number of contributions toward the coordination of information services. It issued an inventory of the information activities of defense agencies,<sup>5</sup> with the thought that the compilation and distribution of such facts throughout the Department of Defense would encourage the many enterprises described to work together whenever possible, and to make use of each other's services. It recommended the integration of the two largest information centers supported by the military departments to form an Armed Services Technical Information Agency, as has already been described. An informal subcommittee proved to be an effective catalyst in bringing about improvements in the exchange of pertinent data between defense agencies and the Atomic Energy Commission. The Committee also sponsored a symposium on Slavic translations which resulted in the establishment, at the Library of Congress, of a central catalog of English translations and abstracts of Slavic scientific publications, to serve all government agencies and other interested organizations.<sup>22</sup>

The National Science Foundation is encouraging the coordination of information services in several ways. One of the programs of its Office of Scientific Information is aimed at better dissemination of Russian scientific literature to American scientists. The Foundation is accumulating data on the more important Russian scientific journals, the coverage of Russian journals by the leading abstracting services, the sources and availability of translations of Russian scientific publications, the extent to which the various areas of Russian science are adequately covered by translations, and current efforts to publish and distribute translated tables of contents of Russian scientific journals. Columbia University has been given a grant for the translation of articles on physics and the compilation of data for a new Russian-English scientific dictionary. The rest of the program is still in the planning stage, but the Foundation intends to take steps to accomplish the following: effective distribution to interested American scientists of translated titles of papers appearing in the leading Russian scientific journals; establishment of a center for the collection, listing, reproduction, and distribution of translations; and development of means of facilitating prompt and complete coverage of Russian literature by the leading abstracting and indexing services. Many organizations, both public and private, are preparing translations; and coordination

of their efforts by means of a single center, to serve all interested organizations and individuals, should prevent duplication of effort and accomplish broader diffusion of the available information.

In cooperation with the Technical Information Division of the Library of Congress, the Foundation has made a small-scale preliminary study to discover to what extent data originally appearing in unpublished government technical reports eventually are published in the regular scientific journals.<sup>23, 24</sup> The authors of about 100 unclassified reports in four representative fields of science were asked if the information contained in the reports had been published, and if so, where and when. An analysis of the 84 replies received indicated that 47 of the 84 reports had been published in whole or in part and 13 were in process of publication; that 5 of the remaining reports had been announced and were easily obtainable by the general public; that 18 were unsuitable for publication (usually because they reported on incomplete research); and that only one which was apparently not to be published contained information worthy of publication. This subject will be investigated further, because the extent to which the information in reports is eventually published, and the time-lag between its appearance in report form and in the published literature, could affect the policies and procedures of the report centers.

The Foundation is making an informal survey of the manner in which other government agencies disseminate the scientific data resulting from their research programs, in order to determine to what extent additional coordination is needed. The defense agencies have a centralized information service in ASTIA, and this is expected to cooperate fully with the services of AEC and NACA, which also conduct research related to national defense. There is no center for the collection and distribution of technical reports of other government agencies, but as yet there is no clear indication that any such center is needed.<sup>25</sup>

Most of the other agencies with large research programs, for example, the Department of Agriculture, the Public Health Service, the Geological Survey, and the Bureau of Standards, make every effort to publish the results of their research as promptly as possible. The majority of these appear in professional journals, and the remainder in printed series of reports, such as the *Professional Papers* of the U.S. Geological Survey, that are widely distributed and well known. The agencies in question, therefore, have no large report centers of their own, since most of the information they produce is accessible in

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the published literature, and many of the formal, printed report series are covered by leading indexing and abstracting services.

There does appear to be a need, however, for a better means of exchanging information on current projects among all agencies engaged in research. Most directors of research programs must rely upon personal contacts and informal liaison to obtain information on the related projects of other agencies. The Foundation has initiated a program for gathering facts about the investigations supported by government agencies in several areas of science. In the field of psychology, project information is now reported regularly to the Foundation by all other agencies, and it prepares and distributes to the other agencies quarterly reports of government-sponsored projects in psychology and related areas, arranged by a subject breakdown and also by state and institution.<sup>26</sup> It is anticipated that similar reports on projects in other scientific fields will be issued when sufficient material has been collected.

The National Research Council has encouraged cooperation by sponsoring conferences in which representatives of government information services and libraries, scientists, and editors of scientific publications have participated. In 1949 two conferences on science abstracting were held to discuss the necessity for the coordination of indexing and abstracting services and the possible ways of achieving it. A two-day meeting on primary publication in February 1950 considered the possible methods of reducing the costs of publication, the need for financial assistance to journals, and the responsibilities of sponsors of research in regard to publication. Following this conference, the Interdepartmental Committee on Scientific Research and Development obtained figures on the increase in the volume of scientific publication in recent years, and discussed with government agencies the advisability of treating the costs of publication as part of those of research. Later, after consultation with other government agencies, the National Science Foundation made a questionnaire survey to obtain more facts about the financial status of scientific journals and their backlogs of unpublished papers. The publication problem, like most scientific information problems, is complex and cannot be solved overnight; but these efforts to throw light on it are contributing towards its eventual solution.

In addition to the impetus given to coordination by the efforts of government agencies, a number of professional societies are actively interested in following developments in information services, discussing current problems, and encouraging cooperation. The Special Libraries

Association and its local science-technology groups, and the Division of Chemical Literature of the American Chemical Society, have been particularly active.

Another organization that provides a useful forum for discussion of information problems is the American Documentation Institute (ADI). It was founded in 1937 by a group of "nominating agencies," each of which named a member. Among the nominating agencies were eight government bodies interested in problems of documentation. They hoped that by supporting the ADI officially they would be contributing to the coordination of information services and to cooperative study of the most pressing documentation problems. Moreover, through the affiliation of ADI with the International Federation of Documentation, international action could be furthered. ADI's first efforts were devoted to promoting the use of microfilm in scholarly work. At that time both the Library of Congress and the Department of Agriculture Library let space for photographic reproduction services that were operated as concessions. The ADI was given permission to install a "bibliofilm service" in the Department of Agriculture Library, which demonstrated that such a service, operated at cost, could provide photocopies at reasonable rates and became the precursor of the Photoduplication Service at the Library of Congress. The ADI recently voted to accept individual memberships and has now become primarily a professional organization for persons engaged in various aspects of documentation. It undoubtedly will work to further cooperation among information activities, both government and private.

Several international conferences on scientific information and bibliographic services have stressed the need for international coordination of information services and bibliographic publications, and toward this end they have recommended that each country take steps to coordinate its own services and appoint national planning groups to cooperate with other national and regional groups. One conference, the Royal Society Scientific Information Conference in London in the summer of 1948, was attended by representatives of the Commonwealth countries and the United States. The others were sponsored by Unesco. They have consisted of two on science abstracting in June 1949, the first devoted to the medical and biological sciences and the second to science abstracting in general, and one in November 1950 on the improvement of bibliographic services. The numerous recommendations and the results of these four meetings have been summarized and arranged topically by the present writer in an earlier paper.<sup>27</sup> Their

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principal result, however, is that a number of international committees and national groups have been established to follow through on the recommendations of the conferences and are working steadily to increase cooperation both internationally and nationally.

Other international organizations striving to achieve universal accord on documentation and bibliographic matters are the International Federation of Documentation, the International Federation of Library Associations, and the International Standards Organization. The latter has an active committee on documentation which works with national affiliates of the organization, such as the American Standards Association and its committee on standardization in library work and documentation, toward the adoption of standards on such points as publication, citations, and abbreviations.

*Summary.* Information centers are playing an increasingly important role in government, especially in support of programs in science and technology. They have been developed primarily to organize and exploit sources of information which in the past have not been typically the stock-in-trade of libraries. Primary among such materials are unpublished research reports, but included also are pamphlets, reprints, and journal articles, and even smaller units of published or unpublished information.

This fact has had marked effect upon the organization and methods of the centers. So has the fact that in many cases their staffing has required at least some substantive knowledge of the subject matter involved. So also, to a certain extent, has the character of the clientele, which in some cases has been special scientific or industrial groups.

For all these reasons many of the centers have been developed apart from and outside of libraries. Others, though largely staffed by scientific workers in addition to librarians, have been organized in libraries. **But wherever located they tend to share certain common techniques.** These have many elements of ordinary library work. There also are emphasized, however, techniques which have not traditionally been prominent in libraries—notably indexing, abstracting and analysis (as opposed to cataloging), coding (as opposed to classification), filing (as opposed to shelving), duplicating methods (as opposed to circulation), and precise knowledge of the subject matter (as opposed to unspecialized interest).

The information center or service forms in consequence a meeting ground for the techniques of librarianship and those of scientific and technological bibliography. The common denominator has been called

documentation, and much verbal blood has been spilt over a definition of this word. The future may reveal that the chief value of the term is to permit librarians and scientists to discuss common problems without the interference of particular professional points of view. This is possibly, too, the value of organizations such as the American Documentation Institute, where particular professional interests can be forgotten in discussing the universal problems incident to communicating the information contained in records.

This community of interest, which is widely understood in the libraries and information centers of the federal government, has already produced many examples of interchange of personnel, of exchange of techniques and products, of standardization, and of sharing portions of a single process, as described in this paper. Such occurrences tend to promote coordination of information services, of whatever kind. This trend is bound to continue under the pressures for economy and the demands for faster and better service. Meanwhile the efforts of the participants are aided, on the national and international fronts, by such organizations as the National Science Foundation, the American Documentation Institute, the American Chemical Society, and Unesco.

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## Aid to National Policy

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ONE OF THE LARGER, and certainly one of the most complex, of the world's library systems is made up of the 197 information centers maintained overseas by the United States Department of State as a part of its international information and educational exchange program. These libraries are situated in almost every free country (97 in 22 countries in Europe; 41 in 24 countries in the Near East, South Asia, and Africa; 52 in 13 Far Eastern countries; and 7 in 6 Latin American countries). In physical size they may range from a couple of second-floor rooms, as in Algiers, to imposing buildings constructed for their purpose, as in Essen. Their collections comprise from 2,000 to 30,000 volumes, and they currently receive from 50 to more than 450 periodicals. Their staff may be 2 or 3 local employees with only part-time supervision from an American cultural attaché, or at the other extreme it may consist of 20 to 25 local employees and 3 or even 4 professional librarians.

A typical library, if there were such a thing, would be in a ground-floor location on a business street, probably in a store-site, with a reading room seating about 50 persons and an open-shelf collection of 5,000 to 7,500 volumes and 200 or 250 magazines. One American professional librarian would supervise perhaps 6 or 8 local employees. It would be visited by 500 or so persons a day and would charge out 100 to 150 books daily. Perhaps it would have a small auditorium in which there were concerts of recordings, film showings, and occasional lectures. Its facilities would be likely to be jammed for all its opening hours by people who, in most countries, had never before had a library freely open to them, with a staff eager to serve and an open-shelf collection of books that could be freely borrowed. Here they come not only to learn about America, but also to see the world through the eyes of American books. All told, 100,000 persons a day

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pass through the doors of these libraries, and there is no hour of any twenty-four when some American library, from Reykjavik to Kuala Lumpur, is not filled with eager readers.

The system had a number of diverse origins, each of which has influenced subsequent conceptions of its proper character. One group of libraries was created as a manifestation of the "Good Neighbor" program in Latin America. As early as July 1941 the Coordinator of Inter-American Affairs contracted with the American Library Association to provide funds for a library to be established and operated by the latter in Mexico City. This institution, the Biblioteca Benjamin Franklin, opened on April 13, 1942, with Harry M. Lydenberg as its first director. Subsequently, and under similar contracts, the American Library Association was enabled to open libraries on behalf of the American government in Managua, Nicaragua; Montevideo, Uruguay; and Buenos Aires, Argentina. The emphasis in the establishment of these libraries was on making otherwise unobtainable American books available as a measure of good will and as a contribution to international understanding, and on providing a demonstration of American public library service.

At about the same time the Office of War Information (OWI) was building up abroad a much larger system of reference libraries as a part of its overseas information and propaganda effort. The principal ones, beginning with that opened officially in London in 1943, were in the British Commonwealth, where their effectiveness was less hampered by language difficulties. Their function was defined in a statement issued in 1943, and phrased as follows:

... to serve writers, the press, radio, American missions, local government agencies, and educational, scientific, and cultural institutions and organizations. They are not lending-libraries for casual readers, nor are they in any sense propaganda centers or distributors of pamphlets. A small, highly selective library containing reference material produced in the United States provides information which can best reach the masses of people in an allied country through the media of the press, the radio, and educational institutions. Besides offering direct information on many subjects, the libraries will consult with special libraries and will assist libraries and organizations within the respective countries in securing for their own use materials about the United States. Significant American books and reports will be brought to the attention of people likely to be interested in using them.<sup>1</sup>

In addition to the dozen or so principal libraries, OWI maintained a

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hundred or more small working collections of recent materials for the reference use of its own staff in overseas outposts, and of the foreign journalists and commentators with whom they dealt.

At the close of the war, on August 31, 1945, the President by Executive Order transferred to the State Department the overseas information functions of both OWI and the Coordinator of Inter-American Affairs, and directed the Secretary of State to complete by the end of the year a study of the need for a continuing information program and the character it should assume, and to submit the necessary legislative and budgetary proposals. In a statement to the press released at the same time, he described the functions of the continuing program as the presentation of a "full and fair picture of American life and of the aims and policies of the United States Government."<sup>2</sup> The requested study was undertaken by Arthur W. Macmahon of Columbia University, with the assistance of Haldore Hanson of the State Department; and although completed somewhat earlier, was released on January 5, 1946.<sup>3</sup>

On the basis of this report the Secretary of State established, effective December 31, 1946, an Office of International Information and Cultural Exchange, one of whose components was to be a Division of Libraries and Institutes. This Division was to be responsible, among other things, for the support of the libraries inherited from OWI and the Coordinator's office, the maintenance of which had been named by Secretary of State Byrnes in his report to the President of December 31, 1945, as first among the wartime information activities to be continued. A considerable reduction in the number of collections maintained by OWI was contemplated; and the Department originally planned a total of about fifty libraries. It was contemplated, however, that though the majority of the small OWI outpost collections would be abolished, those that were retained would be enlarged and made effective institutions.

The third major group of libraries to be transferred to the control of the State Department was that of the Amerika Haueser in Germany. After some initial experimentation with small, frequently semi-officially sponsored, reading rooms, the Army began in 1947 the opening of the group just referred to, which ultimately came to number 26 principal centers, with 137 subsidiary reading rooms.<sup>4</sup> These institutions were materially different in both purpose and character from the OWI libraries and those inherited from the Coordinator's office. They had as their mission not only the favorable depiction of the United States,

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but assistance in the cultural and intellectual reintegration of Germany with the West, with the consequence that their services and collections were much broader in scope than those which appeared elsewhere. Moreover, sums were available for the support of the centers in the American occupation zone of Germany roughly comparable to those provided for all those in the rest of the world put together. This enabled them to operate with large—though almost entirely German—staffs and to undertake a far wider range of concerts, lectures, discussion groups, exhibits, and community activities than was possible otherwise. In consequence book services played a relatively less important role than in other centers; the library, for example, was likely to be thought of, like the concert series, as one of the services of the Amerika Haus rather than, as elsewhere, the institution itself. In the autumn of 1949 responsibility for these units, as part of the obligation for American participation in the government of Germany, was transferred from the Army to the State Department. Small numbers of information centers established by the Army in Austria and Korea similarly were removed to the State Department when those countries came under civilian control.

The last major group of libraries to be brought under the State Department consisted of the twenty-three information centers maintained by the Army in Japan. These, like the German units, had a broader mission than those elsewhere, but they did not attain the wealth of resources or the breadth of activity that distinguished the German program. The first of the Japanese agencies was opened at Tokyo in November 1945; two others, at Kyoto and Nagoya, were started in 1947; fourteen were established in 1948; and an additional six date from late 1950 and 1951. With the ratification of the peace treaty with Japan and the resumption of sovereignty by that country in April 1952, their operation became the responsibility of the State Department as a part of the United States diplomatic mission to Japan, rather than of the Army as a part of the occupation.

The character and services of this system of libraries were shaped not only by its various origins, but also by the changing patterns of administration and policy within which it functioned in the Department of State. The administration of the program within the Department was initially entrusted, in January 1946, to an Office of International Information and Cultural Affairs under the Assistant Secretary of State for Public Affairs. The underlying policy consideration was that in the circumstances of the mid-twentieth century the effective

conduct of international relations required understanding not only between governments but between peoples, and that the achievement of such understanding required the free dissemination of information in areas of ignorance or misinformation. It was assumed that this diffusion normally would take place through private or commercial channels of communication, and that the governmental effort would be a supplementary one. "Propaganda" was identified at the time with Goebbels and the Nazi regime, and was conceived of as inherently an effort to deceive. The Department of State was careful to dissociate its information program from such a concept. Said Assistant Secretary of State Benton, speaking before the American Platform Guild on January 3, 1946: "The State Department does not intend to engage in so-called 'propaganda'. We shall profit most by portraying ourselves frankly, the bad with the good."<sup>5</sup>

With the assumption of responsibility from the OWI, the Department sought from Congress explicit legislative authority and adequate appropriations. Though enabling legislation, after having passed the House and having been favorably reported by the Senate Foreign Relations Committee, failed of final enactment in the closing days of the 79th Congress, reasonably adequate appropriations were made. In the first session of the highly critical 80th Congress, whose leadership was suspicious of the OWI heritage, of the State Department, and of Assistant Secretary Benton, appropriations for the fiscal year ending June 30, 1948, were very sharply curtailed. The latter half of 1947 witnessed a consequent drastic curtailment of the entire information program, including library activities.

An intensive congressional study of the program, however, coupled with increased awareness of growing anti-American attitudes abroad and of the intensification of Soviet propaganda, led to final passage, as the Smith-Mundt Act (Public Law 402, 80th Congress, approved January 27, 1948), of authorizing legislation substantially along the lines previously proposed by the Department. This statute, in specifically authorizing the continuation of overseas information and educational exchange activities, enacted into law the basic conception of policy objectives which had hitherto governed the Department's administration of the program. Its objectives were "to promote a better understanding of the United States in other countries, and to increase mutual understanding between the people of the United States and the people of other countries."<sup>6</sup>

The Act contemplated two distinct operations, "(1) an information

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service to disseminate abroad information about the United States, its people, and policies promulgated by the Congress, the President, the Secretary of State and other responsible officials of Government having to do with matters affecting foreign affairs; (2) an educational exchange service to cooperate with other nations in—(a) the interchange of persons, knowledge, and skills; (b) the rendering of technical and other services; (c) the interchange of developments in the field of education, the arts, and sciences.”<sup>6</sup> An Advisory Commission on Information and an Advisory Commission on Educational Exchange, each composed of private citizens, were provided. While the inclusion of “information centers” as one of the instruments for the conduct of the information service<sup>7</sup> probably indicated a congressional intent that the library program be considered as a part of this service, it has in fact been administered as a part of the educational exchange service.

Though the subsequent creation of the Point Four Program, into which have been absorbed many of the activities contemplated in the Smith-Mundt Act, and the increasing tension of international relations have made it in some part obsolete, the Act is a remarkably sound and broadly conceived piece of legislation. With this solid base of authority it was possible for the Department to set up a relatively stable administrative organization and to obtain increasingly adequate appropriations.

Administratively, an Office of International Information and an Office of Educational Exchange were established (parallel with an Office of Public Affairs responsible for domestic public relations) under the Assistant Secretary for Public Affairs. The Office of International Information was made responsible for the radio, press, and film activities, and the Office of Educational Exchange for the “exchange of persons” program and the book program. The latter was the specific responsibility of a Division of Libraries and Institutes, rechristened in 1950 the Division of Overseas Information Centers, which was charged with support of libraries and binational “cultural institutes” overseas, with the administration of a book translation program, with the distribution of American publications abroad, and with collaboration with publishers to increase the export of American publications.

These responsibilities were, however, solely for the procurement of materials, the development of policy, the technical training of overseas personnel, and similar domestic operations. Libraries overseas were an integral part of the diplomatic or consular missions to which they were attached, reporting to the chief of mission through a Cultural

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Affairs Officer and his superior, the Public Affairs Officer. Selection and assignment of overseas personnel and supervision of overseas operations were the primary obligations of "public affairs staffs" attached to each of the State Department's regional bureaus, and, in personnel matters, of the Division of Foreign Service Personnel. Thus, though the staff responsibility for policy, technical guidance, and procurement of materials for the United States Library in London was ultimately that of the Assistant Secretary for Public Affairs, responsibility for its housing, staffing, and operation was ultimately that of the Assistant Secretary for European Affairs. This division of authority, which has continued under various patterns, has affected all informational operations except radio, and has made it impossible to place a clear-cut responsibility on the one hand for the world-wide library, or any similar program, or on the other hand for the total information program in any country or region.

Meanwhile, the growing international tension and the increasing pressure of anti-American Soviet propaganda had been gradually altering official conceptions of the information program. The Smith-Mundt Act and the State Department's planning had been based on the conviction that the widespread general dissemination of accurate information about the United States and its policies would contribute to a general climate of international understanding, within which the foreign policy of the United States could more easily and effectively attain its objectives. The support of those particular aims and the endeavor to stimulate predetermined behavior on the part of foreign audiences had not been thought to be among the purposes. "Propaganda" had been repeatedly disavowed as an objective and as a technique. But it became increasingly obvious that the Soviets and their instruments were inimical to the United States not because they misunderstood us or were misinformed about us, but because it suited their purposes. Confidence that the mere presentation of a "full and fair picture" of the United States would dispel hostile attitudes—or would do so in time—was weakened. The "to know us is to love us" doctrine lost credit in the Department and in Congress.

The conviction grew that the United States needed a very much larger information effort, one frankly propagandistic and polemical, and one specifically aimed at thwarting Soviet ends. As early as the crucial Italian elections of the spring of 1948 the information program "By press, motion picture, and radio . . . tried . . . [its] level best, through open propaganda methods, to persuade the Italian voter that



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democracy, although offering no immediate paradise, was a surer method of progress. The Voice of America transmitted short-wave radio programs in the Italian language every day, beamed toward the people of Italy, extolling the advantages of democracy. Americans of Italian origin were encouraged to write to their relatives in Italy, counseling them to vote democratic. . . . [It] arranged for American newsreels, showing the American way of life and American aid to Italy, to be shown in every Italian theater for several weeks prior to election day."<sup>8</sup> By December 1949, Assistant Secretary Allen was prepared to cite this as an example of the proper, or at least the necessary, role of the information services in the conduct of foreign affairs, and to state that ". . . propaganda on an immense scale is here to stay. We Americans must become informed and adept in its use, defensively and offensively, or we may find ourselves as archaic as the belted knight who refused to take gunpower seriously 500 years ago."<sup>8</sup>

Acting on this premise, the State Department developed plans for the larger and more aggressive program announced by President Truman in a speech before the American Society of Newspaper Editors on April 20, 1950,<sup>9</sup> which followed a bipartisan resolution introduced in the Senate on March 22 by Senator Benton and twelve associates calling for "a greatly expanded program of information and education among all the peoples of the world to the full extent they can be reached."<sup>10</sup> The "campaign of truth" became the slogan for this new stage, as "a full and fair picture" had been of the old. Redoubled intensity was given the efforts to enlarge and sharpen the program by the outbreak of war in Korea. On July 13, 1950, the President submitted to Congress a very large supplemental appropriation estimate for the information program in the fiscal year then beginning, and stated that he regarded "such an expanded campaign of truth as vital to our National Security."<sup>11</sup> The major part of the appropriation was granted. Though most of this very large increase in funds went into the construction of radio facilities and into other direct "propaganda" activities, with only a very small increase in the support of the libraries, the resulting enlargement and intensification of the whole information effort of which the libraries were a part had very important consequences for them. It led in the first place to a series of administrative changes. Initially a position of General Manager of the Information and Educational Exchange Program was created under the Assistant Secretary of State for Public Affairs, in order to bring under a single direction the activities previously separately carried on as the in-

formation service and the educational exchange service, and to provide central planning, policy guidance, and budgetary services. Since control of field operations and most administrative matters remained dispersed throughout the Department, however, this step provided neither the unity nor the autonomy required. In January 1952 there was established a "semi-autonomous" International Information Administration, in which most of the dispersed undertakings, including supervision of field activities, were drawn together. The former Office of International Information and Office of Educational Exchange were abolished, and all organizational distinctions between the two programs were ended. The Division of Overseas Information Centers became the International Information Center Service, headed by one of the Assistant Administrators of the Information Administration directly responsible to the Administrator.

More important, however, was the fact that the conceptions of proper purpose and technique of the program which underlay the "campaign of truth" imposed important policy questions for the library program. Books, and particularly books organized into a library, differ almost diametrically from the so-called mass media in some aspects of their communications functions. In television or radio thousands, hundreds of thousands, even millions of persons listen at once to a single message. Films and press services to an almost equal degree excel in the prompt and simultaneous conveyance of one message to many auditors. In all these media, moreover, the content is determined by the sender or originator, and in all of them the receiver or auditor has a very limited choice among a few radio or television programs or films or newspapers, that may be actually available at a given place and time. These then would appear to be the ideal instruments for any government to use in conveying a predetermined message to a large audience. On the other hand, a collection of books in a library is intended to afford the user opportunity to seek out the information he wants from a multiplicity of sources. It is the one medium in which the reader is boss; and thousands of books compete for his attention, with the result that the content of the communication is largely controlled by the receiver. For this reason a library would appear to serve as an excellent antidote to false propaganda by giving its users a chance to seek out the truth for themselves; but for the same reason it would seem a poor instrument to "put across" any particular predetermined idea, even though true.

An awareness of this fact entered the thinking of both the admin-

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istrators of the information program, who were men experienced primarily in the "mass media" technique of advertising and journalism and who tended to be skeptical of the propaganda effectiveness of the libraries, and the staff specifically responsible for the library program, who were doubtful of the validity of the new emphasis and particularly of its applicability to their operations. Over the last two years a principal problem has been to resolve this apparent incompatibility by working out sound conceptions of the role of libraries in a propaganda program, and of the modifications in the character of the typical American public library which that role requires.

It was possible by the end of 1952 to believe that a real, if not yet formalized, consensus had been attained on these questions. In general it held that achieving the peculiar utility possible to libraries in the information program required preserving precisely the qualities of integrity and candor that had established their credibility, but directing their service toward those groups and those areas of knowledge with respect to which the availability of a free and honest library service best served the interests of the United States.

The working out of a soundly based conception of the role of libraries in the information program posed its most interesting problems in the fields of book selection and of kinds of service offered. It has been a common suspicion, here and abroad, that the propaganda objectives of the State Department have required a distortion of book selection criteria, so that a user of one of the overseas libraries would have not an honest opportunity to learn the truth about the United States, but only a partial and biased presentation. On this point the record of the State Department is clear and distinguished. Though the different roles of its libraries and of public libraries at home establish different bases of book selection, the Department saw with complete clarity from the beginning that it would be fatal to the success of the libraries if their content were restricted to works eulogistic of the United States and its policies. Repeatedly its representatives have stated this position with vigor, and they have been sustained in this view by the recommendations of the professional advisory committees whose counsel has been sought.<sup>12, 13</sup>

This policy has been regularly followed in book selection, and mature appraisals of every aspect of American life are to be found in the collections, along with expressions of the entire range of responsible political and economic views held in the United States. Works embodying fascist or communist doctrine are not presented,

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nor are publications of organizations officially found by the Justice Department to be subversive. More care than is perhaps necessary in a public library in the United States is used in the selection of works that are highly partisan on any side of a question and that hence may be misunderstood by a foreign reader with inadequate background to appraise them. But with these exceptions—if they be exceptions—the fact that the libraries are instruments of foreign policy has not distorted the criteria of book selection toward the exclusion or suppression of works otherwise appropriate for inclusion. The position of the Department of State perhaps was most fully stated in a letter of November 6, 1952, from Reed Harris, as Acting Administrator of the International Information Administration, to the Librarian of Congress:

... our Information Centers differ from public libraries in that the latter are in effect, owned by and responsible to their users. It would be, in theory, improper for the librarian of such an institution to have predetermined points of view to which he sought, through the collections and services of the library, to persuade its users. We, on the other hand, do have a predetermined set of points of view to which we hope to win the adherence of as much of mankind as may be, and our libraries abroad are one of our instruments for doing so. Where the purpose of an American public library is, in theory, only to enlarge the arena in which ideas may compete for acceptance, it is the purpose of our institutions to enter a set of ideas in the competition. The theoretical bases of our book selection practices are hence necessarily different from those underlying the practices of public libraries at home because their ends are different.

I must add, however, that this distinction, though not without some practical consequences, is more important in theory than in application. Most American librarians do in fact have a commitment to certain basic principles and ideas, to the strengthening of which they gladly devote the resources and services of their institutions—as in the American Heritage Program of the American Library Association. And these basic ideas are, on the whole, substantially identical or at least consistent with the basic principles which it is the explicit purpose of our institutions to forward. We unite, I believe, in the advocacy of democracy as a means of government and an ideal of social relationships, of freedom from authoritarian control in the realm of the mind, of the united action of free countries in the international sphere, and of boldness and firmness in seeking a just and stable peace. The use of library resources in support of the aims of American foreign

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policy is a mean and degrading use of them only if those ends are thought to be mean and disingenuous.

Moreover, even though our libraries are devoted to winning adherents to these and similar points of view, a wise man does not seek to gain the confidence and support of his friends by mendacity or guile, nor is it consistent with the dignity of the United States Government to use such devices in its libraries. We seek rather to provide a wide and honestly selected range of responsible works on the United States, works representing American scholarship and culture, and works expressing the diversity of responsible American opinion on public and world affairs. We not only do not hesitate to include works responsibly critical of the United States or of the foreign policies of the United States; we have included many such in book packets to assure their availability. Recent book packets have included, among many examples, Berger's *Equality by Statute*; Record's *The Negro and the Communist Party*; Taft's *A Foreign Policy for Americans*; Hoover's *Memoirs*; Chambers's *Witness*; and Biddle's *Fear of Freedom*. Myrdal's *American Dilemma* and the Kefauver book are generally available.

We do not of course use works that are seditious in their intent or that embody or express Communist propaganda, any more than we would have done in the case of Nazi propaganda.<sup>14</sup>

The absence of pressures toward the distortion of book selection policies arising from the role of the libraries in the information program should, however, be clearly distinguished from the pressures arising from the domestic controversiality of authors. The information program itself has always been controversial. It has not been firmly grounded in congressional acceptance. Its principal officer has changed almost annually, and none has been in office long enough to acquire solid congressional respect. The appropriations, which must be sought annually—or more frequently, in the case of supplements—and defended before skeptical or hostile committees in both House and Senate, have fluctuated widely. All of these factors have made the responsible officers of the Department and the information program nervously anxious to avert public or congressional criticism and to placate attackers. In consequence the information program has been unusually susceptible to the sorts of pressures that are brought against all libraries to remove books offensive to particular groups or individuals. The Department has generally resisted these when they have been addressed to general policy; it has, e.g., consistently rejected proposals that would have eliminated the more "liberal" news magazines from its collections. It has, however, fre-

quently yielded when there were protests regarding particular titles or works of specific authors, especially if they came in connection with appropriation hearings. The Department, for example, withheld from general use a particular issue of the *Reporter* attacking Senator MacCarran after the Senator had raised objections in an appropriation debate,<sup>15</sup> and in the following year assured the Senator that none of the works of Dr. or Mrs. Harry Overstreet would be used in the program.<sup>16</sup> On the whole, however, the remarkable thing is that there has been so little congressional pressure, rather than so much. It has come up sporadically from individual members, and with hit-or-miss reference to an occasional author or book. Whenever the issue has been publicly joined before the House or Senate as a whole, as in the *Reporter* case, Congress has taken a firm and enlightened position. Any general influence on selection has come rather from anxiety within the Department than from Congress itself, and prior to 1953 it had not had any important effect on the quality of the collections.

In this otherwise perhaps unimportant if undignified scurrying about there was, however, a policy issue of fundamental importance. This had been most clearly stated by Senator McCarthy of Wisconsin in questioning Foy Kohler, then head of the Voice of America, in the Senate appropriations hearings on June 5, 1952:

Senator McCARTHY. Let me ask you this: Do you have any test, not insofar as the material is concerned, but insofar as the author is concerned, as to whether or not you would use this material? If, for example, you find that he had been affiliated with, say, five organizations officially listed as fronts for the Communist Party, would you use his material if the material looked good to you?

Mr. KOHLER. The answer to that, speaking for the radio operation, is "No." Obviously, our facilities for screening are limited.

We have a committee which tries to keep a list of all the names.<sup>17</sup>

The adoption for the library program of the policy implicit in Senator McCarthy's question would have presented two problems. In the first place, it would have required, as Kohler's answer indicated, the preparation of a list—in effect a blacklist—of authors whose political affiliations or history or whose "controversiality" might be adjudged to make them unfit to have any of their works represented in the USIS libraries, regardless of the utility or disutility to the program of the works themselves. Moreover, a list of this kind, as Kohler's answer also indicated, would have to be prepared with few or no adequate facilities

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for investigation or adjudication and hence based in large degree on such uninvestigated and unevaluated "derogatory information" as might be available. Further, the list—if it were to achieve its obvious objective of avoiding possible congressional criticism—would have to go far beyond the relatively few genuinely subversive writers (whose works would, of course, almost never be used in any case because of lack of utility) and would have to include many loyal persons whose views or activities were "controversial" or might be objectionable to the members of Congress most active in the matter. For the Department of State of the United States to attempt to make judgments systematically on such grounds obviously would raise questions of public policy of a grave character.

In the second place, and perhaps even more importantly, to allow other considerations to override the fundamental question of utility to the program would mean that the Information Administration would deny itself access to weapons needed in its work in order to avert domestic criticism. Insofar as genuinely subversive writers were concerned, the practical effect would be small, since only in very rare and special cases could their products be used to advantage; but if such considerations were expanded to include writers who might be considered "controversial," the effect on the library program might be crippling. On many subjects the most effective presentations of the American point of view have been by writers who might fall into that class; and in the general field of culture and literature it was obviously impossible to present an adequate representation of American achievement confined to safely conservative writers. Worst of all, perhaps, the wholesale weeding that would be necessary to reduce the present library holdings to the works of assuredly "noncontroversial" writers could not have been concealed, and would seriously damage the community standing of the institutions.

In a specific earlier case, when the Department became aware of the presence of clearly harmful works by Howard Fast in some overseas centers (largely but by no means entirely, in Amerika Haueser in Germany, and inherited from earlier gifts and transfers), the Department had taken prompt remedial action both as to present holdings and as to future policy. This was done on the basis of a careful consideration of the actual utility of Fast's individual works, in the light of his reputation abroad as a Soviet-endorsed author. The instructions prohibited completely the use of Fast's novels, except for a group—largely written during the "popular front" period of World

War II—which were highly laudatory of the United States and were clearly contrary to the present party line. This group could continue to be used when in the judgment of the local mission overseas Fast's credibility among pro-Communist groups made them useful propaganda.

The principles implicit in these instructions were considered in detail and at length by the Department's Advisory Commission on Books Abroad, consisting of Martin R. P. McGuire, Professor, the Catholic University of America; Cass Canfield, Chairman of the Board, Harper & Brothers; Robert L. Crowell, President, Thomas Y. Crowell Company; Robert Downs, Director of Libraries, University of Illinois; Lewis Hanke, Director, Institute of Latin American Studies, University of Texas; George P. Brett, Jr., President, Macmillan Company; Keyes D. Metcalf, Director of Libraries, Harvard University; and by its Advisory Commission on Educational Exchange, consisting of J. L. Morrill, President, University of Minnesota; Mark Starr, Educational Director, International Ladies Garment Workers Union; Edwin B. Fred, President, University of Wisconsin; Harold Willis Dodds, President, Princeton University; and Mr. McGuire, mentioned above as a member of the Commission on Books Abroad.

Both of these bodies made unanimous recommendations through channels to the Secretary of State, to the effect that the Department should be free to use whatever works most effectively served the purposes of the information program, and that these judgments should be based on the materials themselves. Further extensive discussion led to the adoption of that general principle, with a number of safeguards against its abuse, as a general policy of the Information Administration, and to its announcement in a document issued February 3, 1953.

It appeared therefore to be firmly concluded that the selection of books for the collections would be determined primarily with regard to the effectiveness of libraries in the information program, and to a conviction that the libraries gained their effectiveness from a confidence on the part of their users that here they had a genuine means to seek the truth. Within this broad pattern, book selection would emphasize those areas that were of primary concern in foreign policy (especially, of course, international relations, history, economics, and political science); would fit the level of the collections to the needs of the most useful audiences; would base the emphasis in such fields as technical books and children's books on their value in furnishing information; and would exclude works of subversive or hostile intent.



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On the other hand, in the fields it professed to cover, the book selection process would establish the candor and integrity of the library.

Even more complex were the problems of determining the particular audiences the libraries should try to reach and the services they should attempt to render. Initially the overseas libraries offered their services passively and equally to all. The free and indiscriminate availability of their resources became in fact one of their widely advertised virtues, and was put forward as a symbol of American democracy and egalitarianism. Unquestionably it made a deep impression abroad, and was one of the sources of the remarkable popularity and respect which the libraries attained. With the inauguration of the "campaign of truth" came a recognition of the need for a sharpening of objectives, in terms both of ideas to be conveyed and of audiences to be reached. The entire information program had aimed at the broadest possible dissemination of facts, in the hope that within the intellectual climate this dissemination would help to achieve, the right concepts would grow in the right spots. The "campaign of truth" sought to move directly toward the implantation of specific ideas in specific places.

In the case of the libraries a certain automatic selectivity had taken place in consequence of the facts that only a minority of the population in most countries could make use of high-level books in a foreign language, and that the libraries existed in only a few large metropolitan centers. It was increasingly thought that the information program must move more directly to win over such groups as urban labor, farmers and farm workers, and the lower economic levels of the white-collar class, to whom Communism made a special appeal. One consequence was a belief that the libraries must extend their services to interest such groups by exhibits, film showings, group discussions, and lectures, and by the inclusion of a larger proportion of simple vernacular materials in their collections. The Amerika Haus network, which had been remarkably successful in reaching large segments of the German population by carrying on a comprehensive program in which book services were only one element, became the model for this concept of the library operation. The substitution in 1950 of the term "information center" for "library" in official usage was intended to symbolize the broader emphasis.

At the same time, there was criticism of the fact that a high proportion of the persons who did make extensive use of the libraries belonged to an upper economic and social group already friendly to the United States, and that the libraries were, in effect, preaching to the

converted. There was occasionally an expression of the view that restrictive measures should reduce the expenditure of effort on unrewarding sections of the clientele; but it was in general clearly recognized that a serious loss of reputation and effectiveness would follow any departure from the policy that the United States libraries were for everyone.

Analysis of the actual resources of the library system, however, showed that any thought of making it an effective instrument for reaching *directly* any large proportion of the population was chimerical. In all of England there was one USIS library of less than 20,000 volumes. In India the ratio of libraries to population was as if one very small-town public library of five to six thousand volumes had to serve the whole United States east of the Mississippi and north of the Ohio and Potomac. Any general effort toward the indiscriminate enlargement of the potential audience seemed in this circumstance patently unnecessary. The example of the Amerika Hauser was fallacious in that, as has been indicated, almost as much was expended on their service to the 22,000,000 residents of the American zone of occupation, as on the libraries serving the more than one billion persons in the other countries in which the program operated. Results comparable to theirs were likely to be obtained only by a similar per capita expenditure elsewhere, which was quite beyond imagination.

Particularly in such countries as those of northern and western Europe, in which the population is well served by their own media of communication—their own radio networks, press services, book publishers, and libraries—and in which a very high proportion of the total population is politically effective, it seemed obviously desirable that the libraries should concentrate their attention on those persons and institutions from which information would be passed on through indigenous channels to the population at large, and on those persons and institutions capable of making decisions and taking action in the political and economic sphere. In concrete terms, this meant that such persons as professors, authors, journalists, commentators, and the like on the one hand, and political leaders, industrialists, trades union officials, and the like on the other (opinion-moulders and decision-makers, respectively) were the people whom the libraries needed to serve and from whose service they should not be diverted by efforts to enlarge the "grass-roots" approach.

As one moved into less developed countries, this conclusion became less clear-cut. In southeast Asia, for example, the absence of similar

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institutions of their own to which they would normally turn for information, and the fact that the politically effective members of the population were but a very small fraction of the whole, made it conceivable that a system of American institutions could attract and could serve directly a significant proportion of the politically effective population. At the same time, the paucity or inadequacy of indigenous channels, such as press and radio, made such direct contact necessary if the ultimate recipients of information were to be reached at all. Even here, however, the answer probably lay not so much in attempting to enlarge the audience reached by the library service itself, as in devising simpler and less expensive institutions in which direct contacts could take place through nonliterary media.

From these considerations emerged the conclusion that the first function of the libraries was to serve as a competent, reliable, and comprehensive source of accurate information about the United States and about international affairs in which the United States has an interest; that its primary audience should be the people whose official actions might be affected by such information and the people through whom such information could be disseminated to the politically effective population at large; that every feasible means should be used to call the library's services to the attention of such persons and to facilitate use of them, including individual calls by the library staff; that service should continue to be freely offered to all who seek it, but that no efforts should be made to promote the enlarged indiscriminate public use of the library to the detriment of its services to its primary audience; and that in less developed countries a more flexible program aimed at direct contact with politically effective members of the general public should be developed.

This synthesis of views, in which the libraries served neither as neutral and passive instruments in the general dissemination of ideas on the one hand, nor as disingenuous instruments of "propaganda" on the other, but as carefully used means of bringing to specific audiences on specific issues an information service of high integrity, was embodied in a manual of library operation completed but not issued at the time of the writing of this article, and was gradually being realized in the actual operation of the centers overseas.

There has been increasing evidence of the effectiveness of the libraries as components of the information program, and of the public and administrative recognition of that effectiveness. The *New York Times*, in a survey of the total overseas information program by its

foreign correspondents published in its November 24, 1952, issue, said:

In all the reports received, hardly an ill word was uttered about any of the U.S.I.S. libraries. Wherever operated they seemed to stand in relation to foreign students, teachers and others with special interests as the films stood to the public in general.

In Britain the libraries appeared to be growing more popular, in France they were popular with many thousands, in West Germany they were the best liked and most successful of all United States propaganda mediums, in the Netherlands they were one of the most successful United States activities, in Belgium they were popular, in Switzerland they were very popular, in Italy they have had a large and healthy growth, in Spain they were so popular they were unable to cope with the demand, in Yugoslavia they were well attended, and in Greece and Turkey they were very popular.

From the Middle East it was reported that the libraries were usually well filled and much used for reference, and from South Africa that they were very popular, being the only libraries open to nonwhites, who constituted 40 per cent of the book borrowers.

Generally the same conditions prevailed in the Far East. The Indian report was that there was no doubt of the good work done by the libraries, in Pakistan they were found to be the most effective American operation there, in Japan some were very popular, some not, on Formosa they were very valuable and always crowded, in Burma they were a tremendous success, in Thailand they were popular, especially with the youth, and in the Philippines they were widely used, particularly by students.

Latin-American reports confirmed the general impression. Mexico found the libraries very popular, eminently worth while and most efficient from the standpoint of direct results for money spent. In Panama the effort was said to be very important though generally inadequate; in Nicaragua, the most effective program there, and in Guatemala, more helpful than any other agency in creating good will.

There has been a heavy turnover of books in the Buenos Aires library in Argentina, where reference books have been found especially useful.<sup>18</sup>

Within the State Department as well, reports from the field assigned a constantly higher evaluation to the work of these institutions. And a subcommittee of the Senate Committee on Foreign Relations, created to investigate the overseas information programs of the United States and working under the chairmanship of Senator Fulbright, in an interim report of January 30, 1953, proposed as one of two recommendations for improving the information program that "we should

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give more attention to developing the fuller potentiality of those heretofore relatively unexploited programs involving libraries, exchanges, book publications, cultural relations activities, and other relatively long-range activities, which have frequently been more effective in creating understanding and support for America than the mass media."<sup>19</sup>

This was the situation as the new administration took office in January. Without question the character and effectiveness of the overseas libraries would be shaped in the future, as in the past, by the administrative structure within which they operated, and by the governing policies of the total program of which they were a part. Here there was a confusing congeries of trends and possibilities. Almost everyone was in agreement that the organization and policies of the overseas information program needed a fundamental rethinking, but there was a wide divergence of views as to the direction in which a reconsideration should lead.

In the area of fundamental policy two basically different, even opposed, trends of opinion were emerging. One, reflecting perhaps the views of those most intimately familiar with foreign reactions to the American information program, held that insofar as our activities in the rest of the free world were concerned our propaganda had been too direct, too shrill, too polemical and, in a sense, too patronizing. It was increasingly felt that a view implicit in much thinking about the information program, namely, that the minds and allegiances of friends or potential friends were *objects* of policy, to be manipulated to serve American ends, was repugnant to American principles and deeply offensive to the very people it sought to win. Adherents of this general opinion were inclined to favor a reduction in press and radio output to the free world, and a restriction of that output to factual reporting somewhat after the fashion of the BBC. They also tended to favor an increase in long-range cultural activities aimed at the creation of an honest understanding between the United States and its allies—a bond of common purpose founded upon a common appreciation of the facts of international life and a common ideological outlook. They recognized that the exigencies of the time would not await the leisurely and unguided growth of such understanding, and that vigorous and carefully directed efforts would be necessary to create it; but these efforts needed, they believed, to be candid, intellectually mature, quiet, and aimed at the fundamental ideological sources of attitudes rather than at the day-to-day play of attitudes on

particular issues. Spokesmen of this view were likely to deprecate a too exclusive emphasis on anti-Communist propaganda, holding that the problem was basically one of establishing a sound ideological basis for a free world order, to which negative propaganda could make only a limited contribution.

In partial opposition to the emphasis on positive, long-range, cultural activities was the opinion that elimination of the Soviet menace to Western civilization must be the immediate and transcendent objective of all our efforts, and that the stress in the information program should be on direct and aggressive psychological warfare—an emphasis to which all more remote and general efforts should be subordinated.

Views on the appropriate organizational placement of the information program were varied in the extreme, and seemed likely to be influenced by those on general policy. Proponents of a more militant propaganda program were disposed to advocate creation of a separate agency, divorced from the State Department, for carrying it out. Those seeking enlargement of the cultural phases of the program were apt in turn to urge their separation from the "propaganda" activities.

Questions of the proper organization and basic policy of the information program are currently the subject of two major inquiries. The Senate on June 30, 1952, passed Senate Resolution 74, authorizing the Committee on Foreign Relations to conduct an investigation of the objectives, operation, and effectiveness of all foreign information programs of the United States government. The subcommittee appointed under this resolution, chaired by Senator Fulbright of Arkansas and after its extension in the 83rd Congress by Senator Hickenlooper of Iowa, undertook a sober and careful study, with special attention to the longer-range cultural elements of the program. Its interim report of January 30, 1953, already cited, laid emphasis on the library program, but at the time of writing its inquiries are still in progress.

The President meanwhile appointed a committee under the chairmanship of William Jackson, with a somewhat similar directive. Most of the members of this group, charged with submitting to the President by June 30, 1953, plans for the organization and conduct of the government's total overseas psychological effort, were men experienced in psychological warfare and in the use of mass media; and it was believed that their study would be primarily concerned with the type of operation pertinent to these.

To the two constructive projects named there was added in February 1953 an inquiry by the Permanent Investigating Subcommittee of

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the Senate Committee on Government Operations, which was devoted to exposing "subversion and waste" in the Voice of America but which soon extended itself to other elements in the information program. This investigation, under the chairmanship of Senator McCarthy of Wisconsin, touched immediately on the question of the use of materials by "controversial" authors. Extracts from the Department's directives on this point were quoted in ways which suggested that they were an attempt to infiltrate Communist propaganda; and the full texts, which would have made their opposite intent self-evident, were not published. In the resultant confusion the new administration of the Department, which had just taken office and was not familiar at first hand with the situation, was reported in the press to have rescinded the two previous directives; to have issued one forbidding the use under any circumstances of anything written by a "controversial person, Communists, fellow travelers, etc.";<sup>20</sup> to have modified this a few days later by deleting "controversial person";<sup>21</sup> to have caused the issuance of a directive to publishers exporting materials under the Information Media Guarantee Program which required them to certify that nothing so exported was by a "Communist, fellow traveler, or person who might be considered controversial"; to have rescinded this by telegram;<sup>22</sup> and finally to have issued a directive which was not shown to the press but was described by Department representatives as prohibiting the use in USIS libraries of books by Communists and of periodicals that consistently presented Communist propaganda.

Some members of the press understood from comments by Department personnel that the latest directive would be confined in its application to "known Communists," and that no author would be excluded merely because someone disagreed with his views or he was thought to be "left of center."<sup>23</sup> If this interpretation is correct the new instructions, though approaching the problem differently, would substantially confirm the Department's previous practice, and in some respects would be more permissive than the previously rescinded directives. In a later official statement, however, the Department distinguished between "clear cases" about which there would be "no problem," and "other cases" in which the officers responsible for the program would make determinations on the basis of all sources available to the government.<sup>24</sup> This comment suggests that there was in fact contemplated a systematic inquiry into the loyalty of authors whose books were purchased, at least to the extent of a check of the

files of the House Committee on Un-American Activities and similar records. The probability was that in the absence of investigative facilities to provide the basis of a more informed determination, there would be strong pressure to ban an author about whom there was more than trivial "derogatory information" in the Committee files, in order to avoid getting into an area of doubt. It is of some interest that Senator McCarthy, who had seen the directive, as the reporters had not, expressed himself as entirely satisfied with it.

Much depended on the spirit in which the directive would be applied, as well as on its actual content. It was certainly possible to operate a sound and successful library program under its announced terms; it was equally possible to apply it in ways that would discredit the libraries overseas and seriously limit their effectiveness.

In this confused situation certain elemental facts seemed to be clear. One was that foreign policy could not free itself from responsibilities of public persuasion. The difficulty in obtaining ratification of the European Defense Community treaty by the very European powers which had planned and drawn it—a difficulty which threatened the whole basis of American foreign policy in Europe—showed with painful clarity how fruitless is an agreement between governments to which their respective peoples have not been persuaded. A second was that no day-to-day efforts at producing conviction could be successful unless they could rely on the existence of a substratum of common understanding and values. The achievement of this in turn could be hoped for only from a program which sought not to manipulate the minds of friendly nations toward American ends, but which, out of "a decent respect to the opinions of mankind," aimed to hold clearly before the world principles of universal validity, deserving the assent of other nations and their full association in seeking common goals.

The truths on which such a structure of universal belief and purpose could be erected were no longer so few or so self-evident as they were in 1776, and successful persuasion of a lasting kind today required extensive and candid communication between peoples on very complex questions of ideology. It was also obvious that books were one of the few competent vehicles for this necessary commerce of ideas, and that any successful program would require their wise and skillful use. However awkward our steps toward mastering that use, it seemed a safe prophecy that libraries, as a principal means for the employment of books, would become an increasingly important instrument of the foreign policy of the United States.



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